



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

Bid Receiving - PWGSC / Réception des  
soumissions - TPSGC

11 Laurier St. / 11, rue Laurier

Place du Portage , Phase III

Core 0B2 / Noyau 0B2

Gatineau, Québec K1A 0S5

Bid Fax: (819) 997-9776

**INVITATION TO TENDER**

**APPEL D'OFFRES**

Tender 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.

**Soumission 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 et 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**

Ship Refits and Conversions / Radoubss et  
modifications de navires and / et

11 Laurier St. / 11, rue Laurier

6C2, Place du Portage

Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> DRY DOCKING OF CCGS PRIVATE ROBERTS	
<b>Solicitation No. - N° de l'invitation</b> F2599-170001/A	<b>Date</b> 2017-03-07
<b>Client Reference No. - N° de référence du client</b> F2599-170001	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$\$MD-032-26226
<b>File No. - N° de dossier</b> 032md.F2599-170001	<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 2017-03-22</b>	
<b>Time Zone</b> Fuseau horaire Eastern Daylight Saving Time EDT	
<b>F.O.B. - F.A.B.</b>	
<b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Moore(md div), Chris	<b>Buyer Id - Id de l'acheteur</b> 032md
<b>Telephone No. - N° de téléphone</b> (819) 420-2893 ( )	<b>FAX No. - N° de FAX</b> (613) 697-0375
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> CCGS PRIVATE ROBERTSON CANADIAN COAST GUARD 867 LAKESHORE ROAD BURLINGTON Ontario L7S 1A1 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> Raison sociale et adresse du fournisseur/de l'entrepreneur	
<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>



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire		Del. Offered Liv. offerte
						Destination	FOB/FAM Plant/Usine	
1	DRY DOCKING OF CCGS PRIVATE ROBERT S -	F2599	F2599	1	IT	\$	\$	See Herein
2	HST 13%	F2599	F2599	1	IT	\$	\$	See Herein

**Invitation to Tender  
(ITT)**

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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, if applicable, and the basis of selection;
- Part 5 Certifications: includes the certifications to be provided;
- Part 6 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, the Basis of Payment, the Federal Contractors Program for Employment Equity - Certification, the Insurance Requirements and any other Annexes.

### **1.2 Summary**

- (a) The requirement is:
  - i. To carry out the dry docking inspection, repair and maintenance of the Canadian Coast Guard Vessel CCGS Private Robertson in accordance with Annex A – Statement of Work and any associated technical information.
  - ii. To carry out Unscheduled Work authorized by the Contracting Authority.
- (b) As per the Integrity Provisions under section 01 of Standard Instructions 2003 bidders must provide a list of all owners and/or Directors and other associated information as required. Refer to section 4.21 of the Supply Manual for additional information on the Integrity Provisions.
- (c) The requirement is exempt from the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), Annex 4 and the North American Free Trade Agreement (NAFTA), Chapter 10, Annex 1001.2b, Paragraph 1(a).

The requirement is subject to the Agreement on Internal Trade (AIT). The sourcing strategy relating to this procurement will be limited to suppliers from Eastern Canada, in accordance with the Shipbuilding, Refit, Repair and Modernization Policy (2010-08-16).
- (d) The Federal Contractors Program (FCP) for employment equity applies to this procurement; see Part 5 - Certifications, Part 7 - Resulting Contract Clauses and the annex titled Federal Contractors Program for Employment Equity - Certification.

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032mdF2599-17001

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032md  
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### **1.3 Work Period - Marine**

Commencement: April 6, 2017 (or Earlier)  
Completion: 14 days for arrival at contractor's facilities.

### **1.4 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.

## **PART 2 - BIDDER INSTRUCTIONS**

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

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada (PWGSC). 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 SACC 2003 (2015-07-03) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

### **2.2 Submission of Bids**

Bids must be submitted only to PWGSC Bid Receiving Unit by the date, time and place designated on the front page Invitation to Tender (ITT) of the bid solicitation.

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

All enquiries must be submitted in writing to the Contracting Authority (CA) no later than five (5) working 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 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.

Any clarifications or changes to the bid solicitation resulting from questions and answers will be included as an amendment to the solicitation.

### **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.

**Refer to Annex "J1" for Deliverables/Certifications.**

## **2.5 Optional Site Visit – Vessel**

It is recommended that the Bidder or a representative of the Bidder visit the work site. Arrangements have been made for the site visit to be held on March 21, 2017 at 10:00am at the Canadian Coast Guard Base, Canadian Center for Inland Waters, 867 Lakeshore Road Burlington, Ontario L7S 1A1. All visitors have to report to the Main Entrance, where they will sign in.

Contractors may park in the parking lots located at the front of the building. All Contractors must have valid identification to sign in at the Canadian Center for Inland Waters building main entrance, reception desk.

Bidders are requested to communicate with the Contracting Authority (CA) no later than three (3) business days prior to the site visit date to confirm attendance and provide the name(s) of the person(s) who will attend. Bidders may be requested to sign an attendance sheet. Bidders who do not attend or do not send a representative will not be given an alternative appointment but they will not be precluded from submitting a bid. Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation.

## **2.6 Bidders' Conference**

A bidder's conference chaired by the Contracting Authority will be held at Canadian Coast Guard Base, Canadian Center for Inland Waters, 867 Lakeshore Road Burlington, Ontario L7S 1A1 on March 21, 2017 at 1:00pm. The scope of the requirement outlined in the solicitation will be reviewed during the conference and questions will be answered. It is recommended that bidders who intend to submit a bid attend or send representation.

Bidders are requested to communicate with the CA before the conference to confirm attendance. Bidders should provide, in writing to the CA, the names of the person(s) who will be attending and a list of issues they wish to table no later than three (3) business days before the scheduled Conference.

Any clarifications or changes to the solicitation resulting from the Bidder's Conference will be included as an amendment to the solicitation. Bidders who do not attend will not be precluded from submitting a bid.

## **2.7 Additional Instructions - Work Period – Marine**

By submitting a bid the Bidder certifies that they have sufficient material and human resources allocated or available and that the work period outlined in 1.3 Work Period – Marine is adequate to both complete the known work and absorb a reasonable amount of unscheduled work.

The vessels will be unmanned during the work period and will be considered to be out-of commission. The vessels during that period will be in the care or custody of the Contractor and under its control.

For details please refer to Annex I – Vessel Custody, Appendix 1 and 3 – Acceptance Certificate

Upon acceptance of the Work for this vessel, this vessel will be returned to the care, control and custody of Canada.

For details please refer to Annex I – Vessel Custody, Appendix 2 and 4 – Acceptance Certificate

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

### **3.1 Required Submission Sections**

Canada requests that bidders provide their bid in separate sections as follows:

Section I: Technical Bid (1 hard copy)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

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

### **3.2 Required Submission Information**

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

The Bidder must provide all of the deliverables as referenced in Annex J – Deliverables / Certifications.

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

The Bidder must submit their financial bid in accordance with Annex H – Financial Bid Presentation Sheet and in Annex H - Appendix 1 & 2 – Pricing Data Sheet. The total amount of applicable taxes must be shown

separately. **Section III: Certifications**

The Bidder must submit the certifications required under Part 5.

### **3.3 Submission Format**

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

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

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

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

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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.

#### **Technical Bid**

Notwithstanding deliverable requirements specified within the solicitation and its associated Annex A – Statement of Work, mandatory deliverables that must be submitted with the Bidder's bid to be deemed responsive are summarized in Annex J – Deliverables / Certifications – J1 Mandatory Tender Deliverables Check List.

#### **Financial Bid**

In order to be compliant, the Bidder's bid must to the satisfaction of Canada meet all requirements and provide all information required under Part 3, article 3.2 – Required Submission Information, Section II – Financial Bid.

#### **Certifications**

Bidders must submit the certifications required under Part 5 – Certifications.

Canada reserves the right to request information to support any bid requirement. The Bidder is instructed to address each requirement in sufficient depth to permit a complete analysis and assessment by the Evaluation Team. The Bid will be deemed responsive if it is found to meet all of the mandatory requirements.

### **4.2 Evaluation of Price**

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

#### **4.2.1 Unscheduled Work and Evaluation Price**

In any vessel refit, repair or docking contract, unscheduled work will arise after the vessel and its equipment is opened up and surveyed.

An anticipated cost for the unscheduled work will be included in the evaluation price. The evaluation price will be calculated by including an estimated amount of additional person-hours multiplied by a firm hourly charge-out rate for unscheduled work and will be added to the firm price for the known work.

The evaluation price will be used for evaluating the bid. The additional amount of person-hours for unscheduled work will be based on historical experience and there is no minimum or maximum amount of unscheduled work nor is there a guarantee of such unscheduled work.

### **4.3 Basis of Selection**

A bid must comply with the requirements of the 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.

Bidders should note that all contract awards are subject to Canada's internal approvals process, which includes a requirement to approve funding in the amount of any proposed contract. Notwithstanding that a Bidder may have been recommended for award of contract, issuance of any contract will be contingent upon internal approval in accordance with Canada's policies. If such approval is not given, no contract will be awarded.

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032md  
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#### **4.4 Deliverables after Contract Award**

For details refer to Annex J – Deliverables / Certifications – J2 Deliverables after Contract Award.

## **PART 5 - CERTIFICATIONS**

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

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, 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 may render the bid non-responsive or constitute a default under the Contract.

### **5.1 Certifications Required Precedent to Contract Award**

The certifications listed below should be completed and submitted with the bid but may be submitted afterwards. If any of these required certifications 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 comply with the request of the Contracting Authority and to provide the certifications within the time frame specified will render the bid non-responsive.

#### **5.1.1 Integrity Provisions - Associated Information**

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of SACC 2003 Standard Instructions - Goods or Services - Competitive Requirements. The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

#### **5.1.2 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 ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from Employment and Social Development Canada (ESDC) - Labour's website.

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 C 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.

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## **PART 6 - FINANCIAL AND OTHER REQUIREMENTS**

### **6.1 Financial Capability**

SACC Manual clause A9033T (2012-07-16) Financial Capability

### **6.2 Vessel Transfer Costs**

Vessel Transfer Costs will apply to the evaluation price of this solicitation.

1. The evaluation price must include the cost for transferring the vessel from its home port to the shipyard/ship repair facility where the Work will be performed and the cost of transferring the vessel to its home port following completion of the Work, in accordance with the following:
  - a. The Bidder must provide the location of the shipyard/ship repair facility where it proposes to perform the Work together with the applicable vessel transfer cost from the list provided under article 6.2, paragraph 2 of this section and shall be entered into Annex H – Financial Bid Presentation Sheet, item D).
  - b. If the list in article 6.2, paragraph 2 of this section does not provide the shipyard/ship repair location where the Bidder intends to perform the Work, then the Bidder must advise the Contracting Authority, in writing, at least ten (10) calendar days before the bid closing date, of its proposed location for performing the Work.
  - c. The Contracting Authority will confirm to the Bidder, in writing, at least five (5) calendar days before the bid closing date, the location of the shipyard/ship repair and the applicable vessel transfer cost. A bid that specifies a location for executing the Work which is not on the list provided under article 6.2, paragraph 2 of this section and for which a notification in writing has not been received by the Contracting Authority as required above, will be considered non-responsive.
2. List of shipyard/ship repair facilities and applicable vessel transfer costs:

Vessel: CCGS Private Robertson V.C.  
Home port: Burlington, Ontario

Transfer costs in the case of vessels transferred using a government delivery crew include the fuel cost at the vessel's most economical speed of transit and for unmanned refits only, crew transportation costs for the delivery crew based on the location of the vessel's home port and the shipyard/ship repair facility.

Crew transportation costs do not include any members of the delivery crew who remain at the shipyard/ship repair facility in order to discharge project responsibilities related to the vessel being transferred. Transfer costs in the case of vessels transferred unmanned by either commercial towing, railway, highway or other suitable means of transportation must be:

- (i) included as part of the Bidder's financial bid in the case where the Bidder is responsible for the transfer; or
- (ii) identified as the applicable vessel transfer cost, as given in the list below, in the case when Canada is responsible for the transfer.

**Shipyard/Ship Repair Facility - Applicable Vessel Transfer Costs (per Vessel)**  
**Unmanned only: CCGS Private Robertson V.C.**

Company	City/Province	Unmanned Transfer Cost (per Vessel)
Caraquet Marine Industry Ltd.	Caraquet, NB	\$21,974.00
Canadian Maritime Engineering Limited	North Sydney, NS	\$39,242.00
Chantier Forillon	Gaspe, QC	\$19,598.00
Chantier Matane	Matane, QC	\$15,410.00
Davie Industries Inc.	Levis, QC	\$10,728.00
Heddle Marine	Hamilton, ON	\$212.00
Hike Metal Products Ltd	Wheatley, ON	\$5,717.00
MetalCraft Marine Inc.	Kingston, ON	\$3,882.00
Oceans Industries Inc.	Saint-Bernard-Sur-Mer, QC	\$11,693.00
Oceans Industries Inc.	QC, QC	\$10,728.00
Verreault Navigation Inc.	Les Mechins, QC	\$15,975.00

All Prices in CAD

**Proposed Dry Docking Location:** \_\_\_\_\_.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

**6.3 Docking Facility**

Before contract award, the successful Bidder may be required to demonstrate to the satisfaction of Canada that the certified capacity of the docking facility, including any means or conveyance to remove the vessel from the water, is adequate for the anticipated loading in accordance with the related dry docking plans and other documents detailed in the Contract. The successful Bidder will be notified in writing and will be allowed a reasonable period of time to provide detailed keel block load distribution sketches and blocking stability considerations, along with the calculations to show the adequacy of the proposed docking arrangement.

At the time of bid closing the Bidder must provide current and valid certification of the capacity and condition of the docking facility to be used for the Work. The certification must be provided by a recognized consultant or classification society and must have been issued within the past two years.

Although a dry docking facility may have a total capacity greater than the vessel to be docked, the weight distribution of the vessel may cause individual block loading to be exceeded. Also, while the physical dimensions of a dry docking facility may indicate acceptability for docking of a specific vessel, other limitations such as spacing of rails on a marine railway, concrete piers of abutments adjoining the dry dock may, preclude the facility from being considered as a possible dry docking site and render the bid non-responsive.

**Refer to Annex "J1" for Deliverables/Certifications**

**6.4 Workers' Compensation - 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 with the bid, a certificate or letter from the applicable Worker's Compensation Board confirming the Bidder's good standing account. Failure to comply with the request may result in the bid being declared non-responsive.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

## **6.5 Valid Labour Agreement**

If the Bidder has a labour agreement, or other suitable instrument, in place with all its unionized labour, it must be valid for the proposed period of any resulting contract. Documentary evidence of the agreement or suitable instrument must be provided on or before bid closing date. If this information is not provided with the bid it will render the bid non-responsive.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

## **6.6 Preliminary Work Schedule**

6.6.1 At the time of bid closing the Bidder must submit to Canada one (1) copy of its preliminary production work schedule in Gantt chart format. This schedule is to show the commencement and completion dates for the Work in the available work period, including realistic target dates for significant events. This schedule will be reviewed with the successful Bidder at the Pre-Refit Meeting.

6.6.2 The Contractor's schedule must include target dates for each of the following significant events:

- a. Commencement of Work as defined at Article 7.5.1
- b. Period to be in Dry-Dock
- c. All priced work items listed in Annex H Appendix 1 and Appendix 2
- d. FSR Scheduling for Priced Work Items
- e. Completion of Work as defined at Article 7.5.1
- f. Dock and Sea Trials Period
- g. Resumption of custody by Canada

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

## **6.7 Safety Measures for Fueling and Disembarking Fuel**

Fueling and disembarking fuel from Canadian government vessels must be conducted under the supervision of a responsible supervisor trained and experienced in these operations. At bid closing date, the Bidder must provide details of its safety measures for fueling and disembarking fuel together with the name and qualifications of the person in charge of this activity. If this information is not provided with the bid it will render the bid non-responsive.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

## **6.8 ISO 9001:2008 - Quality Management Systems**

The Bidder shall have in place a Quality Management System registered to ISO 9001:2008 or a Quality Management System modeled on ISO 9001-2008 and shall provide at time of bid closing:

- If registered its valid ISO 9001-2008 certification;
- Example of Quality Control Plan (QCP) as per article 6.16.

Documentation and procedures of bidders may be subject to a Quality System Evaluation (QSE) by the Technical Authority during bid evaluation period.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

## **6.9 Health and Safety**

The Bidder must submit with its bid objective evidence that it has a documented Health and Safety system fully compliant with all current Federal, Provincial and Municipal regulations. If this information

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is not provided with the bid it will render the bid non-responsive.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

### **6.10 Fire Protection, Fire Fighting and Training Procedures**

The Bidder must submit with its bid objective evidence that it has documented fire protection, firefighting and training procedures compliant with current regulations and their insurance requirements. The fire protection, firefighting and training procedures will, once accepted by Canada, form part of the Contract. Please refer to article 7.27. If this information is not provided with the bid it will render the bid non-responsive.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

### **6.11 Hazardous Waste**

1. The Bidder acknowledges that sufficient information has been provided by Canada with respect to the location and estimated amount of hazardous materials such as asbestos, lead PCBs, silica or other hazardous materials or toxic substances.
2. The price includes all costs associated with the removal, handling, storage, disposal and/or working in the vicinity of hazardous materials such as asbestos, lead, PCBs, silica and other hazardous materials or toxic substances on board the vessel, including those costs resulting from the need to comply with applicable laws and regulations in relation to the removal, handling, disposal or storage of hazardous materials or toxic substances.
3. The completion date for the Work takes into account the fact that the removal, handling, storage, disposal and/or working in the vicinity of hazardous materials such as asbestos, lead, PCBs, silica and other hazardous materials or toxic substances may be affected by the need to comply with applicable federal, provincial and municipal laws or regulations and that this will not be considered to be an excusable delay.

### **6.12 Insurance Requirements**

The Bidder must provide with its bid 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 Annex D – Insurance Requirements. If this information is not provided with the bid it will render the bid non-responsive.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

### **6.13 Welding Certification**

1. Welding must be performed by a welder certified by a Canadian Standards Association (CSA) accredited business in accordance with the requirements of the following Canadian Standards Association (CSA) standards:
  - a. CSA W47.1-09 (R2014), Certification for Companies for Fusion Welding of Steel (Minimum Division Level 2); and
  - b. CSA W47.2-11, Certification for Companies for Fusion Welding of Aluminum (Minimum Division Level 2.1).

The bidder shall submit proof of Certification for Companies for Fusion Welding of Steel with the bid. The certification shall remain valid for the duration of the contract. If this information is not provided with the bid, it will render the bid non-responsive.

Proof of Certification for Companies for Fusion Welding of Aluminum is not required with the bid but must be readily available before the commencement of any fabrication work, and upon request from the Technical Authority. The

certification shall remain valid for the duration of the contract.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

#### **6.14 Project Management Services**

The Bidder is required to provide a Project Management Team experienced and capable of successfully managing the ship refit contract as defined herein. Project management personnel, services and deliverables must comply with the requirements detailed in the contract.

##### 1. Intent

- a. For the purposes of this solicitation, job titles used are for clarity within this document only. The Contractor is free to choose job titles that suit its organization.
- b. The Contractor, through its Project Management Team, is responsible to discharge the duties and supply the deliverables required in the Contract and the Specifications.
- c. Project Management encompasses the direction and control of such functions as engineering, planning, purchasing, manufacturing, assembly, overhauls, installations and test and trials.

##### 2. Project Manager

- a. The Contractor must supply an experienced Project Manager (PM).
- b. The PM must have experience in managing a project of this nature.

##### 3. Project Management Team

Other than the Project Manager, the Contractor must assign and vary other job descriptions to suit its organization; provided however that the collective resume of its Project Management must provide for the effective control of the project elements including but not limited to:

- i. Project Management
- ii. Quality Assurance
- iii. Planning and Scheduling

##### 4. Tender Deliverable

Names, brief resumes, and list of duties for each of the team members that ensures that each of the project elements listed in Article 3. above have been addressed.

##### 5. Reports

The following Management Reports and Documentation are to be prepared and maintained by the Contractor and submitted to Canada in accordance with the Contract or upon request by the Contracting Authority.

- i. Production Work Schedule
- ii. Inspection Summary Report
- iii. Growth Work Summary

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

#### **6.15 List of Proposed Subcontractors**

If the bid includes the use of subcontractors, the Bidder shall provide a list of all subcontractors including a description of the things to be purchased, a description of the work to be performed by specification

Solicitation No. - N° de l'invitation  
F2599-17001/A  
Client Ref. No. - N° de réf. du client  
F2599-17001

Amd. No. - N° de la modif.  
File No. - N° du dossier  
032mdF2599-17001

Buyer ID - Id de l'acheteur  
032md  
CCC No./N° CCC - FMS No./N° VME

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section and the location of the performance of that work. The list should not include the purchase of off-the-shelf items, software and such standard articles and materials as are ordinarily produced by manufacturers in the normal course of business, or the provision of such incidental services as might ordinarily be subcontracted in performing the Work, i.e. subcontract work valued at less than \$ 5,000.00 aggregate for the project.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

#### **6.16 Quality Control Plan**

At the time of bid closing the Bidder must submit to Canada an example of its Quality Control Plan (QCP) as applied on previous projects of the same nature.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

#### **6.17 Inspection and Test Plan**

At the time of bid closing the Bidder must submit to Canada an example of an Inspection and Test Plan (ITP) complete with requirement and inspection reports as developed on previous projects of the same nature.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

#### **6.18 Environmental Protection**

At the time of bid closing the Bidder must submit details of its environmental emergency response plans, waste management procedures and/or formal environmental training undertaken by its employees.

For details refer to Annex J Deliverables / Certifications, J1 - Mandatory Tender Deliverables Check List.

## **PART 7 - RESULTING CONTRACT CLAUSES**

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

### **7.1 Requirement**

The requirement is:

- a. To carry out the dry docking refit of the Canadian Coast Guard Vessel CCGS Private Robertson V.C. in accordance with associated Technical Specifications as detailed in Annex A – Statement of Work.
- b. To carry out unscheduled work authorized by the Contracting Authority.

### **7.2 Definitions:**

In this Contract, unless the context otherwise requires:

‘CCGS’ – means Canadian Coast Guard Ship

‘Design Change’ - means any change to approved drawings, Specifications, or statements of requirements. Work necessary to eliminate " fouling" points or for the correction of errors made by the Contractor is not a "Design Change" within the meaning of this section;

‘DFO’ – means Department of Fisheries and Oceans Canada

Dollar, “Dollars”, or “\$” - means the legal tender of Canada;

“Good Marine Quality” - means constructed of materials unaffected by or resilient to moisture, sea spray (salt water and salt air), extremes of temperature, and other hazards of the marine environment, and has been designed and constructed to perform intended function in the marine environment conditions of the Atlantic Ocean and to withstand the dynamic motions and cyclic loads imparted in a marine environment. The item must further be designed and constructed for ease and safety of operation under dynamic conditions, to have an operational life equal or superior to the useful life that can be reasonably expected from such item in similar operating conditions and to require minimum maintenance as a result of such marine operating conditions;

‘Milestone’ - means an event, the completion of which signifies a significant and measurable achievement in the performance of the Work.

‘OEM’ - means original equipment manufacturer;

‘Owner’ - means Her Majesty the Queen in right of Canada as represented by the Minister of Fisheries and Oceans

‘Owners Representative’ – means the Chief Engineer of the Henry Larsen or his/her designate.

‘PWGSC’ – means Public Works and Government Services Canada;

‘Working Day’ – means any day of the year other than a Saturday, Sunday or any statutory holiday in the Province of Newfoundland, Nova Scotia, Ontario, Quebec or in the Public Service of Canada, and any reference herein to a day or days will mean calendar days unless expressly described as a “Working Day” or “Working Days”

Capitalized terms not otherwise defined in these Articles of Agreement numbered 1 through 42 inclusive and defined in the General Conditions or Supplemental Conditions referred to at Section 7.2 will have meanings given to them in those Annexes.

### 7.3 Standard Clauses and Conditions

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

#### 7.3.1 General Conditions

SACC Manual Clause 2030 (2015-09-03), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

SACC Manual Clause 2030 (2015-09-03) General Conditions Higher Complexity - Goods are hereby amended as follows:

##### Section 22 Warranty

1. The Contractor, if requested by Canada, must replace or repair at its own expense any finished work, excluding Government Issue incorporated in the Work, which becomes defective or which fails to conform to contract requirements as a result of faulty or inefficient manufacture, material or workmanship.
2. Despite acceptance of the finished work, and without restricting any other term of the Contract or any condition, warranty or provision imposed by law, the Contractor warrants that the following will be free from all defects and will conform with the requirements of the Contract:
  - (a) The painting of the underwater portion of the hull for a period of 365 days commencing from the date of undocking, except that the Contractor will only be liable to repair and/or replace to a value to be determined as follows:

Original cost to Canada of the underwater painting work, divided by 365 days and multiplied by the number of days remaining in the warranty period. The resultant sum would represent the "Dollar Credit" due to Canada from the Contractor.

- (b) All other painting work for a period of 365 days commencing from the date of acceptance of the Work;
  - (c) All other items of work for a period of ninety (90) days commencing from the date of acceptance of the Work, except that:
    - (i) the warranty on the work related to any system or equipment not immediately placed in continuous use or service will be for a period of ninety (90) days from the date of acceptance of the vessel;
    - (ii) for all outstanding defects, deviations, and work items listed on the Acceptance Document at Delivery, the warranty will be ninety (90) days from the subsequent date of acceptance for each item.
3. The Contractor agrees to pass to Canada, and exercise on behalf of Canada, all warranties on the materials supplied or held by the Contractor which exceed the periods indicated above.
4. Refer to Annex E - Appendix 1 for Warranty Defect Claim Procedures and Form.

#### 7.3.2 Supplemental General Conditions

SACC Manual Clause 1029 (2010-08-16), Ship Repairs apply to and form part of the Contract.

SACC Manual Clause 1031-2 (2012-07-16), Contract Cost Principles, apply and form part of the Contract.

#### **7.4 Security Requirement**

There is no security requirement applicable to this Contract.

#### **7.5 Term of Contract**

##### **7.5.1 Work Period – Marine**

1. Work must commence and be completed as follows:

Commencement: April 6, 2017 or earlier.  
Completion: 14 days for vessel after arrival at contractor's facilities.

2. The Contractor agrees that the above times (the "Work Period") provides an adequate period to perform the subject work and absorb a reasonable amount of unscheduled work. The Contractor certifies that they have sufficient material and human resources allocated or available to complete the subject work and a reasonable amount of unscheduled work within the Work Period.

Canada has the right to delay the arrival of the Vessel at the Contractor's facility subject to the following conditions:

- (a) Canada gives 30 calendar days advance notice of a 15 day maximum delay. The Contractor may claim no additional cost when arrival of the vessel at the Contractor's facility is delayed up to a maximum of 15 calendar days beyond the commencement date, above. The Completion Date shall be extended by a period equal to the length of the delay.
- (b) Canada does not provide 30 calendar days advance notice of a delay. The Completion Date shall be reasonably adjusted to reflect the impact of the delay on the arrival of the Vessel and Canada shall pay only the Daily Services Fee referred to in the Basis of Payment for the period of the delay.

##### **7.5.2 Additional Instructions to Work Period**

The vessel will be unmanned during the work period and will be considered to be out of commission. The vessel during that period will be in the care and custody of the Contractor and under its control.

##### **7.5.3 Time is of the Essence**

Refer to SACC Manual Clause 2030 (2015-09-03), sub-section 10, Time is of the Essence.

## **7.6 Authorities**

### **7.6.1 Contracting Authority**

The Contracting Authority for the Contract is:

Chris Moore  
Department of Public Works and Government Services Canada (PWGSC)  
Marine Sector  
PWGSC, 6C2 Place du Portage, Phase III  
11 Laurier Street,  
Gatineau, Quebec, K1A 0S5  
Tel: (819) 420-2893  
Fax: (819) 956-7725  
E-Mail: [chris.moore@pwgsc.gc.ca](mailto:chris.moore@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.

### **7.6.2 Technical Authority**

The Technical Authority for the Contract is: (To be completed at contract award)

Name:  
Title:  
Department:  
Address:

Phone:  
Fax:  
Email:

The Technical Authority 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.

### **7.6.3 Inspection Authority**

The Inspection Authority for the Contract is the Canadian Coast Guard is: (To be completed at contract award)

Name:  
Telephone:  
Cell:  
Fax:  
E-mail:

The Inspection Authority named above is responsible for the inspection of the Work and acceptance of the finished work. The Inspection Authority may be represented on site by a designated Inspector and any other Government of Canada Inspector who may from time to time be assigned in support of the designated Inspector.

## 7.7 Payment

### 7.7.1 Basis of Payment – Firm Price

In consideration of the Contractor satisfactorily completing its obligations under the Contract, the Contractor will be paid a firm price indicated in Annex B – Basis of Payment for the known Work. All Taxes are extra, if applicable.

Payment for unscheduled work shall be in accordance with Annex B as applicable.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Specifications, will be authorized or paid to the Contractor unless such design changes, modifications or interpretations have been authorized in writing, by the Contracting Authority prior to their incorporation in the Work.

### 7.7.2 Terms of Payment – Progress Payment

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to ninety (90) percent of the amount claimed and approved by Canada if:
  - a. an accurate and complete claim for payment using form [PWGSC-TPSGC 1111](http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf), Claim for Progress Payment (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>), and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - b. the amount claimed is in accordance with the basis of payment;
  - c. the total amount for all progress payments paid by Canada does not exceed ninety (90) percent of the total amount to be paid under the Contract;
  - d. all certificates appearing on form [PWGSC-TPSGC 1111](#) have been signed by the respective authorized representatives.
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.
3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

### 7.7.3 Liens – Section 427 of the Bank Act

Refer to SACC Manual Clause [H4500C](#) (2010-01-11) Liens – Section 427 of the Bank Act

### 7.7.4 Limitation of Price

Refer to SACC Manual Clause [C6000C](#) (2011-05-16) Limitation of Price

### 7.7.5 Time Verification

Refer to SACC Manual Clause [C0711C](#) (2008-05-12) Time Verification

## 7.8 Invoicing Instructions

The Contractor must submit invoices in accordance with the information required in SACC Manual General

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Conditions 2030 (2015-09-03) Higher Complexity – Goods, Section 13 as well as Article 7.7 – Payment and Article 7.8 – Invoicing Instructions herein.

### 7.8.1 Invoices

1. Invoices are to be addressed to:

Canadian Coast Guard Marine Engineering  
520 Exmouth Street  
Sarnia, ON, N7T 8B1  
Attn: Gail Eyre

And;

The original invoice to be forwarded for verification to:

Public Works and Government Services Canada  
Marine Systems Directorate  
Ship Refit Division  
6C2 Place du Portage, Phase III  
11 Laurier Street  
Gatineau, Quebec K1A 0S5  
Attention: Chris Moore

2. Canada will only make payment upon receipt of a satisfactory invoice duly supported by specified release documents and any other documents called for under the Contract.
3. The Contractor shall not submit an invoice prior to the completion and acceptance of the Work or shipment of the items to which it relates.

### 7.8.2 Invoicing Instructions – Progress Claim

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111 <http://www.tpsgc-pwgscc.gc.ca/app-acq/forms/documents/1111.pdf>, 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;
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 one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Contracting Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place.

The Contracting Authority will then forward the original and two (2) copies of the claim to the Contracting Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.

4. The Contractor must not submit claims until all work identified in the claim is completed.

### 7.8.3 Warranty Holdback

A warranty holdback of five (5) percent of the total contract price as last amended (Applicable Taxes excluded) will be applied to the final claim for payment. This holdback will be payable by Canada upon the expiry of the 90 day warranty period(s) applicable to the Work. Applicable Taxes, as appropriate, is to be calculated and paid on the total amount of the claim before the five (5) percent holdback is applied. At the time that the holdback is released, there will be no Applicable Taxes payable, as it was included in previous payments.

## 7.9 Certifications

### 7.9.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

### 7.9.2 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.

## 7.10 Applicable Laws

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

## 7.11 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 1029 (2010-08-16) Ship Repairs;
- (c) the general conditions 2030 (2015-09-03) General Conditions – Higher Complexity - Goods;
- (d) the general conditions 1031-2 (2012-07-16), Contract Cost Principles;
- (e) Annex A – Statement of Work;
- (f) Annex B – Basis of Payment;
- (g) Annex C – Federal Contractors Program for Employment Equity – Certification;
- (h) Annex D - Insurance Requirements;
- (i) Annex E – Warranty;
- (j) Annex F – Procedure for Unscheduled Work;
- (k) Annex G – Quality Control / Inspection;
- (l) Annex H – Financial and Bid Presentation Sheet;
- (m) Annex I – Vessel Custody;
- (n) Annex J – Deliverables / Certifications;
- (o) the Contractor's bid dated \_\_\_\_\_ (insert date of bid), as amended on \_\_\_\_\_ (insert date(s) of amendment(s) if applicable).

## 7.12 Insurance Requirements

The Contractor must comply with the insurance requirements specified in Annex D – Insurance Requirements. 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.

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.

The Contractor must forward to the Contracting Authority within ten (10) working 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

## 7.13 Limitation of Contractor's Liability for Damages to Canada

1. This section applies despite any other provision of the Contract and replaces the section of the general conditions entitled "Liability". Any reference in this section to damages caused by the Contractor also includes damages caused by its employees, as well as its subcontractors, agents, and representatives, and any of their employees.
2. Whether the claim is based in contract, tort, or another cause of action, the Contractor's liability for all damages suffered by Canada caused by the Contractor's performance of or failure to perform the Contract is limited to \$10 million per incident or occurrence to an annual aggregate of \$20 million for losses or damage caused in any one year of carrying out the Contract, each year starting on the date of coming into force of the Contract or its anniversary. This limitation of the Contractor's liability does not apply to nor include:
  - (a) Any infringement of intellectual property rights;
  - (b) Any breach of warranty obligations;
  - (c) Any liability of Canada to a third party arising from any act or omission of the Contractor in performing the Contract; or
  - (d) Any loss for which the policies of insurance specified in the Contract or any other policies of insurance held by the Contractor would provide insurance coverage.
3. Each Party agrees that it is fully liable for any damages that it causes to any third party in connection with the Contract, regardless of whether the third party makes its claim against Canada or the Contractor. If Canada is required, as a result of joint and several liability, to pay a third party in respect of damages caused by the Contractor, the Contractor must reimburse Canada for that amount.
4. The Parties agree that nothing herein is intended to limit any insurable interest of the Contractor nor to limit the amounts otherwise recoverable under any insurance policy. The Parties agree that to the extent that the insurance coverage required to be maintained by the Contractor under this Contract or any additional insurance coverage maintained by the Contractor, whichever is greater, is more than the limitations of liability described in sub article (2), the limitations provided herein are increased accordingly and the Contractor shall be liable for the higher amount to the full extent of the insurance proceeds recovered.
5. If, at any time, the total cumulative liability of the Contractor for losses or damage suffered by Canada caused by the Contractor's performance of or failure to perform the Contract, excluding liability described under subsection 2(a), (b), (c) and (d) exceeds \$40 million, either Party may terminate the Contract by giving notice in writing to the other Party and neither Party will make any claim against the other for damages, costs,

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expected profits or any other such loss arising out of the termination. However, no such termination or expiry of the Contract shall reduce or terminate any of the liabilities that have accrued to the effective date of the termination but which liabilities are subject to the limitations as specified in sub-article 1. through 4., above.

6. The date of termination pursuant to this Article, shall be the date specified by Canada in its notice to terminate, or, if the Contractor exercises the right to terminate, in a notice to the Contractor from Canada in response to the Contractor's notice to terminate. The date of termination shall be in Canada's discretion to a maximum of twelve (12) months after service of the original notice to terminate served by either Party pursuant to sub-article 5., above.
7. Nothing shall limit Canada's other remedies, including Canada's right to terminate the Contract for default for breach by the Contractor of any of its obligations under this Contract, notwithstanding that the

Contractor may have reached any limitation of its liability hereunder.

### **7.13.1 Environmental Impairment Liability Insurance**

1. The Contractor must obtain Contractor's Pollution Liability insurance, providing coverage for Asbestos Abatement, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$5,000,000 per accident or occurrence and in the annual aggregate.
2. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
3. The Contractor's Pollution Liability insurance coverage provided under the remarks section above) 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. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
  - c. Separation of Insureds: 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.
  - d. Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
  - e. Incidental Transit Extension: The policy must extend to losses arising from any waste, products or materials transported, shipped, or delivered via any transportation mode to a location beyond the boundaries of a site at which the Contractor or any entity for which
  - f. the Contractor is legally liable is performing or has performed the operations described in the contract.
  - g. Litigation Rights: Pursuant to subsection 5(d) of the Department of Justice Act, S.C. 1993, 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 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

#### **7.15 Sub-Contracts and Subcontractor List**

The Contracting Authority is to be notified, in writing, of any changes to the list of subcontractors before commencing the work.

When the Contractor sub-contracts work, a copy of the sub-contract purchase order is to be passed to the Contracting Authority. In addition, the Contractor must monitor progress of sub-contracted work and inform the Inspection Authority on pertinent stages of work to permit inspection when considered necessary by the Inspection Authority.

#### **7.16 Work Schedule and Reports**

No later than five (5) calendar days after contract award, the preliminary work schedule provided with the bid must be revised, detailed and resubmitted in preparation to the contract award meeting. The Contractor must provide a detailed work schedule showing the commencement and completion dates for the Work in the available work period, including realistic target dates for significant events. During the work period the schedule is to be reviewed on an ongoing basis by the Inspection Authority and the Contractor, updated when necessary, and available in the Contractor's office for review by Canada's authorities to determine the progress of the Work.

#### **7.17 Insulation Materials - Asbestos Free**

All materials used to insulate or re-insulate any surfaces on board the vessel must meet Transport Canada Marine standards, for commercial marine work, and, for all work, be free from asbestos in any form. The Contractor must ensure that all machinery and equipment located below or adjacent to surfaces to be re-insulated are adequately covered and protected before removing existing insulation.

#### **7.18 Trade Qualifications**

The Contractor must use qualified, certificated (if applicable) and competent trades people and supervision to ensure a uniform high level of workmanship. The Technical Authority may request to view and record details of the certification and/or qualifications held by the Contractor's trades people. This request should not be unduly exercised but only to ensure qualified trades people are on the job.

## 7.19 ISO 9001:2008 - Quality Management Systems

In the performance of the Work described in the Contract, the Contractor must comply with the requirements of:

ISO 9001:2008 - Quality management systems - Requirements, published by the International Organization for Standardization (ISO), current edition at date of submission of Contractor's bid.

The Contractor's quality management system must address each requirement contained in the standard, however, the Contractor is not required to be registered to the applicable standard.

## 7.20 Project Management Services

The Bidder is required to provide a Project Management Team experienced and capable of successfully managing the ship refit contract as defined herein. Project management personnel, services and deliverables must comply with the requirements detailed in the contract.

### 1. Intent

- a. For the purposes of this solicitation, job titles used are for clarity within this document only. The Contractor is free to choose job titles that suit its organization.
- b. The Contractor, through its Project Management Team, is responsible to discharge the duties and supply the deliverables required in the Contract and the Specifications.
- c. Project Management encompasses the direction and control of such functions as engineering, planning, purchasing, manufacturing, assembly, overhauls, installations and test and trials.

### 2. Project Manager

- a. The Contractor must supply an experienced Project Manager (PM).
- b. The PM must have experience in managing a project of this nature.

### 3. Project Management Team

Other than the Project Manager, the Contractor must assign and vary other job descriptions to suit its organization; provided however that the collective resume of its Project Management must provide for the effective control of the project elements including but not limited to:

- i. Project Management
- ii. Quality Assurance
- iii. Planning and Scheduling

### 4. Tender Deliverable

Names, brief resumes, and list of duties for each of the team members that ensures that each of the project elements listed in Article 3. above have been addressed.

### 5. Reports

The following Management Reports and Documentation are to be prepared and maintained by the Contractor and submitted to Canada in accordance with the Contract or upon request by the Contracting Authority.

- i. Production Work Schedule
- ii. Inspection Summary Report
- iii. Growth Work Summary

## **7.21 Quality Control Plan**

The Contractor must implement and follow the Quality Control Plan (QCP) prepared according to the latest issue (at contract date) of ISO 10005:2005 Quality management - Guidelines for quality plans, approved by the Inspection and the Technical Authority. The QCP must describe how the Contractor will conform to the specified quality requirements of the Contract and specify how the required quality activities are to be carried out, including quality assurance of subcontractors. The Contractor must include a traceability matrix from the elements of the specified quality requirements to the corresponding paragraphs in the QCP. The QCP must be made available to the Inspection and Technical Authority for review and approval within five (5) calendar days after contract award.

The documents referenced in the QCP must be made available when requested by the Inspection Authority.

The Contractor must make appropriate amendments to the QCP throughout the term of the Contract to reflect current and planned quality activities. Amendments to the QCP must be acceptable to the Inspection Authority and the Technical Authority.

For details refer to Annex G - Quality Control / Inspection

## **7.22 Inspection and Test Plan**

The Contractor must in support of its Quality Control Plan (QCP), implement an approved Inspection and Test Plan (ITP).

The Contractor must provide at no additional cost to Canada, all applicable test data, all Contractor technical data, test pieces and samples as may reasonably be required by the Inspection Authority to verify conformance to contract requirements. The Contractor must forward at his expense such technical data, test data, test pieces and samples to such location as the Inspection Authority may direct.

For details refer to Annex G - Quality Control / Inspection

## **7.23 Equipment/Systems: Inspection/Test**

Inspections, Tests and Trials of Equipment, Machinery and Systems shall be conducted in accordance with the Specification. The Contractor is responsible for performing, or having performed, all Inspections, Tests and Trials necessary to substantiate that the materiel and services provided conform to contract requirements.

For details refer to Annex G - Quality Control / Inspection

## **7.24 Environmental Protection**

The Contractor and its subcontractors engaged in the Work on a Crown vessel must carry out the Work in compliance with applicable municipal, provincial and federal environmental laws, regulations and industry standards.

The Contractor must have detailed procedures and processes for identifying, removing, tracking, storing, transporting and disposing of all potential pollutants and hazardous material encountered, to ensure compliance as required above. The Contractor must maintain in force their Environmental Protection procedures through the course of the contract.

All waste disposal certificates are to be provided to the Technical Authority, with information copies sent

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to the Contracting Authority. Furthermore, additional evidence of compliance with municipal, provincial and federal environmental laws and regulations is to be furnished by the Contractor to the Contracting Authority when so requested.

The Contractor must have environmental emergency response plans and/or procedures in place. Contractor and subcontractor employees must have received the appropriate training in emergency preparedness and response. Contractor personnel engaging in activities which may cause environmental impacts or potential noncompliance situations, must be competent to do so on the basis of appropriate education, training, or experience.

### **7.25 Hazardous Waste**

1. The Contractor acknowledges that sufficient information has been provided by Canada with respect to the location and estimated amount of hazardous materials such as asbestos, lead PCBs, silica or other hazardous materials or toxic substances.
2. The price includes all costs associated with the removal, handling, storage, disposal and/or working in the vicinity of hazardous materials such as asbestos, lead, PCBs, silica and other hazardous materials or toxic substances on board the vessel, including those costs resulting from the need to comply with applicable laws and regulations in relation to the removal, handling, disposal or storage of hazardous materials or toxic substances.
3. The completion date for the Work takes into account the fact that the removal, handling, storage, disposal and/or working in the vicinity of hazardous materials such as asbestos, lead, PCBs, silica and other hazardous materials or toxic substances may be affected by the need to comply with applicable federal, provincial and municipal laws or regulations and that this will not be considered to be an excusable delay.

### **7.26 Supervision of Fueling and Disembarking Fuel**

The Contractor must ensure that fueling and disembarking of fuel from Canadian government vessels are conducted under the supervision of a responsible supervisor trained and experienced in these operations.

All fueling and disembarking of fuel on CCGS Private Robertson must be done in accordance with the Contractor's submitted and accepted procedures.

### **7.27 Fire Protection, Fire Fighting and Training**

The Contractor must maintain in force their fire protection, firefighting and training procedures through the course of the Contract.

### **7.28 Loan of Equipment - Marine**

The Contractor may apply for the loan of the Government special tools and test equipment particular to the subject vessel as identified in the Specifications. The provision of other equipment required for the execution of work in the Specifications is the sole responsibility of the Contractor.

Equipment loaned under this provision must be used only for work under this Contract and may be subject to demurrage charges if not returned on the date required by Canada. In addition, equipment loaned under the above provision must be returned in a like condition, subject to normal wear and tear. A list of Government equipment that the Contractor intends to request must be submitted to the Contracting Authority within three (3) days of Contract Award to permit timely supply or for alternate arrangements to be made. The request must state the time frame for which the equipment is required.

For details refer to Annex J Deliverables / Certifications – J2 Deliverables after Contract Award.

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## 7.29 Welding Certification

1. The Contractor must ensure that welding is performed by a welder certified by the Canadian Welding Bureau (CWB) in accordance with the requirements of the following Canadian Standards Association (CSA) standards:
  - (a) CSA W47.1-09, Certification for Companies for Fusion Welding of Steel (Division Level 1 or 2);  
and
  - (b) W47.2-11 (R2015), Certification for Companies for Fusion Welding of Aluminum (Division Level 1 or 2).
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 Technical Authority, the Contractor must provide approved welding procedures and/or a list of welding personnel intended to be used in the completion 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 welding certification.

## 7.30 Procedures for Design Change or Additional Work

SACC Manual Clause B5007C (2010-01-11) Procedures for Design Change or Additional Work  
In addition, refer to Annex F – Procedure for Processing Unscheduled Work.

## 7.31 Vessel Unmanned Refits

SACC Manual Clause A0024C (2010-08-16) Vessel Unmanned Refits.

For details refer to Annex I – Vessel Custody

## 7.32 Pre-Refit Meeting

A Pre-Refit meeting will be convened and chaired by the Contracting Authority at the Contractor's facility at a time to be determined. At that meeting the Contractor will introduce all its management personnel as per its organization chart, and Canada will introduce authorities. Details of ship's arrival and work commencement will be discussed.

## 7.33 Progress Meetings

Progress meetings, chaired by the Contracting Authority, will take place at the Contractor's facility as and when required, generally once a month. Interim meetings may also be scheduled. Contractor attendees at these meetings will, as a minimum, be its Contract (Project) Manager, Production Manager (Superintendent) and Quality Assurance Manager. Progress meetings will generally incorporate Technical meetings to be chaired by the Technical Authority.

During each PRM the Contractor shall provide a status of the overall contracted project, including programmatic, production, test, Integrated Logistics Support, subcontract, risk issues, and progress as it relates to the Schedule, and the associated Work Breakdown Structure. For each PRM, the Contractor shall:

- (a) Ensure that Contractor data, personnel and facilities are available for each formal meeting in order that the meetings may be conducted in an efficient manner; and
- (b) Include the following agenda items for discussion and resolution:
  - i. Contractual Issues;
  - ii. Financial Issues
  - iii. Technical Issues;

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- iv. Environmental, Health and Safety Issues; and
  - v. Previous action items.

### **7.34 Outstanding Work and Acceptance**

1. The Inspection Authority, in conjunction with the Contractor, will prepare a list of outstanding work items at the end of the work period. This list will form the annexes to the formal acceptance document for the vessel. A contract completion meeting will be convened by the Inspection Authority on the work completion date to review and sign off the form PWGSC-TPSGC1205, 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 three (3) copies, which will be distributed by the Inspection Authority as follows:
  - (a) original to the Contracting Authority;
  - (b) one copy to the Technical Authority;
  - (c) one copy to the Contractor.

For details on Acceptance Procedures and Reports refer to Annex I – Vessel Custody

### **7.35 Scrap and Waste Material**

Despite any other provision of the Contract, scrap and waste materials other than accountable material, derived from the Contract, will revert to the Contractor as part of the Contract Price.

### **7.36 Stability**

The Contractor will be solely responsible for the stability and trim of the ship during the period the vessel is in the Contractor's facility, including docking and undocking. The Contractor must maintain weight change information pertinent to the vessel's stability during the docking period. The Technical Authority will supply the Contractor with cross curves of stability, hydrostatic curves, tank status, location of centre of gravity, and other information relevant to the ship's condition upon handing over of the vessel.

### **7.37 Vessel Access by Canada**

Canada reserves the right to have its personnel carry out limited work on equipment on board the vessel. This work will be carried out at times mutually acceptable to Canada and the Contractor.

### **7.38 Title to Property - Vessel**

If the Contractor is in default in carrying any of its obligations under the Contract, Canada, or its agents, will have the immediate right to enter the shipyard, without first obtaining a court order, to take possession of the vessel and all other property of Canada, including, but not limited to, work-in-process located on the premises, and to perform any further work required to enable the vessel and other such property to be removed from the shipyard.

### **7.39 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.

### **7.40 Dispute Resolution**

The parties agree to follow the procedures below for the settlement of any disputes which may arise throughout the life of this Contract prior to seeking redress through court procedures:

- (a) Disputes arising from this Contract will in the first instance be resolved by the Contracting Authority and the Contractor's Contract Administrator within fifteen (15) working days or such additional time as may be agreed to by both parties.
- (b) Failing resolution under (a) above, the Manager of the Ship Refit Division (MD) of the Marine Systems Directorate at PWGSC and the Contractor's Representative Supervisor will attempt to resolve the dispute within an additional fifteen (15) working days.
- (c) Failing resolution under (a) or (b) above, the Senior Director of the Marine Systems Directorate at PWGSC, and the Contractor's Senior Management will attempt to resolve the dispute within an additional thirty (30) working days.
- (d) Notwithstanding the above procedure, either party may seek a decision through the courts at any time during the dispute.

#### **7.41 Failure to Deliver**

Time is of the essence of the Contract. Changes in the Completion date not caused by Canada are Contractor defaults, will prejudice Canada and are at the Contractor's expense. The Completion date will not be extended without consideration being provided by the Contractor acceptable to Canada in the form of adjustment to the price, warranty or services to be provided.

#### **7.42 Care, Custody and Control**

For details refer to Annex I – Vessel Custody and Supplemental General Conditions 1029 (2010-08-16) Ship Repairs Article 09 - Where Vessel Out of Commission.

#### **7.43 Permits, Licenses and Certificates**

The Contractor must obtain and maintain all permits, licenses and certificates of approval required for the work to be performed under any applicable federal, provincial or municipal legislation. The Contractor is responsible for any charges imposed by such legislation or regulations. Upon request, the Contractor must provide a copy of any such permit, license or certificate to Canada.

#### **7.44 Export Licenses:**

Where material is to be imported into Canada, the Contractor is responsible for obtaining all necessary export licenses from the country of origin in sufficient time to enable the export.

#### **7.45 Equivalency of Equipment**

- (a) The Contractor guarantees that the equipment to be delivered under the Contract is:
  - (i) equivalent in form, fit, function and quality to the existing equipment owned by Canada that was described in the bid solicitation that resulted in the Contract; and
  - (ii) fully compatible, interchangeable and interoperable with the existing equipment owned by Canada.
- (b) The Contractor also guarantees that any warranties with third parties concerning the existing equipment owned by Canada will not be adversely affected by Canada's use of the equipment delivered under the Contract (for example, by interconnecting the equipment) or by any other services provided by the Contractor under the Contract. If Canada determines in its sole discretion that any such warranty has been adversely affected, at Canada's sole option, the Contractor must:

- (i) pay to Canada the amount that Canada must pay to the original supplier (or an authorized reseller of that supplier) to re-certify Canada's existing equipment for warranty purposes and any other amounts paid by Canada to a third party in order to restore the equipment to full warranty status;
  - (ii) perform all warranty work on Canada's existing equipment in place of the original supplier; or
  - (iii) pay to Canada the amount that Canada must pay to the original supplier (or an authorized reseller of that supplier) to perform maintenance work on the equipment that otherwise would have been covered by the warranty.
- (c) The Contractor agrees that, during the Contract Period, if Canada determines that any of the equipment is not equivalent in form, fit, function and quality to the existing equipment owned by Canada or is not fully compatible, interchangeable and interoperable with the existing equipment owned by Canada, the Contractor must immediately and entirely at its own expense take all steps necessary to ensure that the equipment satisfies these requirements (for example, by implementing any additional software or firmware), failing which Canada will have the immediate right to terminate the Contract for default. The Contractor agrees that, if Canada terminates the Contract for this reason, the Contractor must pay to Canada the costs of reprocurring the equipment from a third party and the difference, if any, in price paid by Canada to the third party. The Contractor acknowledges that its failure to deliver equivalent equipment that satisfies the above requirements may result in the Contractor (as well as its affiliates and any other entities with whom the Contractor or its principals do not deal at arm's length) being unable to propose equivalent substitutes in response to future PWGSC bid solicitations.

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**ANNEX A - STATEMENTS OF WORK - SPECIFICATIONS**

# **CCGS Private Robertson V.C. Dry-Docking 2017**

Specification No: Spec #827.16

Date: 2017-03-6

Revision No: Rev 03

Prepared by Marine Engineering

Central & Arctic Region

Integrated Technical Services

520 Exmouth Street, Sarnia ON, N7T 8B1

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## 2.0 GENERAL NOTES

### 2.1 IDENTIFICATION

2.1.1 These General Notes describe the Canadian Coast Guard (CCG) requirements applicable to all accompanying Technical Specifications.

### 2.2 REFERENCES

#### 2.2.1 Document Priority Order

<b>ACTS</b>	<b>Title</b>	
<b>CSA</b>	Canada Shipping Act	
<b>CLC</b>	Canada Labour Code	
<b>REGULATIONS</b>	<b>Title</b>	
<b>MOHS</b>	Maritime Occupational Health and Safety	
<b>CT-043-EQ-EG-001E (EKME#3049715v3A)</b>	CCG Welding Specification	
<b>TP127E</b>	Transport Canada Marine Safety Electrical Standard	Transport Canada
<b>70-000-000-EU-JA-001</b>	Specification for the Installation of Shipboard Electronic Equipment	

#### 2.2.2 Drawings, Documentation and applicable Regulations:

<b>FSM Procedures</b>	<b>Title</b>	
7.A.1	Assessing risk	
7.A.12	Potable Water Quality	
7. B.2.	Fall Protection	
7.B.3	Entry Into Confined Spaces	
7.B.4	Hotwork	
7.B.5	Lockout and Tagout	

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7.B.6	Electrical Safety – Energized Circuits	
7.E.5	Handling, Storage & Disposal of Hazardous Material	
7.E.8	Use of Halocarbons	
8.B.1	Security of the Vessel	
10.A.2	Maintenance and Refits	
10.A.6	Paint and Other Coatings	
10.A.7	Contractor Safety and Security	
Ship Specific	Vessel Specific - Asbestos Management Plan	
CA-024-000-EQ-WB-033	MSPV C&P variant final trim and stability booklet for MSPV “A LeBlanc”	
<b>Publications</b>	<b>Title</b>	
CCG/6016	CCG Fleet, Federal Identity Program Guide	
TP3177E	Standard for the Control of Gas Hazards in Vessels to be Repaired or Altered	
IEEE 45-2002	Recommended Practice for Electrical Installation on Ships	
Bulletin No: 06/1989	Grounding Safety in Drydock	Transport Canada
CSA W47.1-F09 (C2014)	Certification of Companies for Fusion Welding of Steel Structures Division 2 Certification	
CSA W47.2-F11	Certification of Companies for Fusion Welding of Aluminum	
CSA W59-F13	Welded Steel Construction – Metal Arc Welding	

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CSA W59.2-FM1991 (C2013)	Welded Aluminum Construction	
AWS D1.6/D1.6M:2007	Structural Welding Code – Stainless Steel	
SSPC-SP 10/NACE no. 2	Near White Blast Cleaning	
CAN/ONGC-48.9712	Non-destructive testing- qualification and certification of NDT (non destructive testing) personnel	
Interline 975	Application Guidelines Potable Water Tank	
<b>DRAWINGS</b>	<b>Title</b>	
AF6101-10000-01	Midship and Other Sections Plans	
AF6101-10000-03	Shell Expansion	
AF6101-10000-04	Watertight Bulkheads Plans	
AF6101-10000-11-01	Rudders Construction Plan Sht 1 of 2	
AF6101-10000-11-02	Rudders Construction Plan Sht 2 of 2	
AF6101-10000-14-01	Dry Docking Plan Sht 1 of 2	
AF6101-10000-14-02	Dry Docking Plan Sht 2 of 2	
AF6101-50000-03	Valve Schedule	
AF6101-56100-02	Steering System Schematic of the Hydraulic System	
AF6101-56100-03	Steering Gear Room Arrangement Plan	
AF6101-63100-01	Paint Schedule	
AF6101-63300-01	Scheme of Cathodic Protection	
AF6101-89940-01-01	General Arrangement Plan Sht 1 of 2	

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AF6101-89940-01-02	General Arrangement Plan Sht 2 of 2	
AF6101-89940-02	Tank Arrangement, Capacity Plan	
AF6101-89940-03	Lines Plan	
AF6101-89940-08	Draft Marks and Load Line Marks Plan	
6094-24300-01	Shaft Line arrangement Plan	
6094-61100-01	Bottom plug Diagram	
TG-28380-assembly	Thordon SXL Steering System wear pads assembly	

### **2.3 OCCUPATIONAL HEALTH AND SAFETY**

- 2.3.1 The Contractor and all sub-contractors must follow Occupational Health and Safety (OHS) procedures in accordance with applicable federal and provincial OHS regulations ensuring that Contractor activities are carried out in a safe manner and do not endanger the safety of any personnel.
- 2.3.2 The Contractor and Contractor's employees must not have access to the vessel's washrooms and crew mess facilities. The Contractor must provide the necessary amenities for the Contractor's and sub-Contractors employees as required.
- 2.3.3 The Contractor must ensure all applicable safety precautions including equipment lock outs and tag outs are implemented prior to the start of work.

### **2.4 ACCESS TO WORKSITE**

- 2.4.1 The Contractor must ensure the TA and CG staffs have unrestricted access to the worksite at all times during the contract period.

### **2.5 WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHIMS)**

- 2.5.1 The Contractor must provide the TA with Material Safety Data Sheets (MSDS) for all Contractor supplied WHIMS controlled products.
- 2.5.2 The TA will provide the Contractor with access to MSDS for all controlled products on the ship for all specified work items.

### **2.6 SMOKING IN THE WORK SPACE**

- 2.6.1 The Contractor must ensure compliance with the Non-Smokers' Health Act. The Contractor must ensure that every employer, and any person acting on behalf of an employer, must ensure that persons refrain from smoking in any work space under the control of the employer. The Contractor must ensure that there is absolutely no smoking onboard the vessel.

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<b>GENERAL NOTES</b>		

**2.7 CLEAN AND HAZARD FREE WORKSITE**

- 2.7.1 Before the Contractor starts any work on the vessel, the Contractor’s Quality Assurance Representative and the TA must walk through each space and area where work is to take place, including access and removal routes and areas adjacent to those where the work is to be done as a result of this specification. The Contractor’s Quality Assurance Representative must take digital pictures of each area showing the outfit therein and download the photos in JPG format onto a CD or DVD. Each picture must be dated and labeled as to the location on the vessel. Two copies of this CD or DVD are to be provided to the TA for reference purposes within 48 hours of the start of the contract.
- 2.7.2 The Contractor, during the work period must maintain those areas of the vessel which Contractor personnel use to access those areas where work is to be undertaken, in a clean condition, free from debris and remove garbage daily.
- 2.7.3 Areas that pose a hazard as a result of the specification work are to be secured and clearly identified by the Contractor with signage to advise and protect all personnel from the hazard in accordance with applicable Canada Labour Code requirements.
- 2.7.4 The Contractor must be responsible for the removal of all garbage generated from the work of this specification and for returning the vessel to the state of cleanliness in which the vessel was at the start of the contract period.
- 2.7.5 Once all known work and final clean-up has been completed, the Contractor’s QA Representative and the TA must perform a ‘walk through’ of the vessel to view all areas where work was performed by the Contractor. Any deficiencies or damage noted must be the responsibility of the Contractor. The deficiencies or damage must be repaired by the Contractor at no cost to the Coast Guard.

**2.8 FIRE PROTECTION**

- 2.8.1 The Contractor must ensure the isolation, removal and installation of fire detection and suppression systems or any components thereof, is performed by a certified technician. When the fire detection or fire suppression system is deactivated or disabled by the Contractor during the contract, the system(s) must be recertified by a qualified technician as fully functional. A signed and dated original copy of the certificate must be delivered to the TA before the signing of the 1205 Acceptance Form.
- 2.8.2 The Contractor must notify the TA and obtain written approval from the TA prior to disturbing, removing, isolating, deactivating / disabling or locking out any part of the fire detection or suppression systems, including heat and smoke sensors.
- 2.8.3 The Contractor must ensure protection against fire at all times including when working on the ship’s fire detection and / or suppression system(s).
- 2.8.4 Failure to take the necessary precautions while performing work on the vessel’s fire suppression system(s) could result in the accidental discharge of the fire suppression agent(s). The systems must be returned to their original condition and adhere to all federal and provincial regulations. The Contractor must recharge and certify systems related to all accidental discharges at no charge to Canada.

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**2.9 TOUCH-UP / DISTURBED PAINT**

2.9.1 Unless stated otherwise the Contractor must supply and apply two coats of marine primer compatible with the vessel’s existing coating system to all new and/or disturbed metal surfaces. (Ref.: Drawing AF6101-63100-01 Paint Schedule)

**2.10 CCG EMPLOYEES AND OTHERS ON THE VESSEL**

2.10.1 CCG / DFO employees and other personnel such as manufacturer’s representatives and/or TCMS or Class surveyors may carry-out other work including work items not included in this specification, onboard the vessel during this work period. Every effort will be made by the TA to ensure this work and the associated inspections and/or surveys do not interfere with the Contractor’s work. The Contractor will not be responsible for coordinating the related inspections or payment of inspection fees for this work unless otherwise specified.

**2.11 REGULATORY INSPECTIONS AND/OR CLASS SURVEYS**

- 2.11.1 The Contractor must contact, coordinate and schedule all regulatory inspections and/or class surveys by the applicable authority: i.e. Lloyd’s, TCMS, HC, Environment Canada or others as required by the specification.
- 2.11.2 Any documentation generated by the above inspections and/or surveys to show that the inspections and/or surveys were conducted (i.e. original signed and dated certificates) must be provided to the TA.
- 2.11.3 The Contractor must not substitute inspection by the TA for the required regulatory inspections or class surveys.
- 2.11.4 The Contractor must provide timely advance notification (minimum of 24 hours) of scheduled regulatory inspections and/or class surveys to the TA so they may witness the inspection.

**2.12 DOCUMENTATION**

- 2.12.1 Prior to the close of contract, the Contractor must submit four (4) original hard copies and one digital copy (pdf) of all requested readings, reports and other documentation to the TA. Hard copies must be printed on Contractor, sub-Contractor or Manufacturer’s letterhead, signed by the originator, bound in standard 3-ring binders and indexed by specification number. The digital (pdf) copy must be emailed to the TA or handed on a USB stick.
- 2.12.2 Recorded dimensions must be to a precision of three decimal places (unless otherwise stated) in the measuring system currently in use on the vessel.
- 2.12.3 The Contractor must provide to the TA current and valid calibration certificates for all instrumentation used during specified tests and trials.

**2.13 CONTRACTOR SUPPLIED MATERIALS AND TOOLS**

- 2.13.1 The Contractor must ensure all materials are new and unused.
- 2.13.2 The Contractor must ensure replacement material such as jointing, packing, insulation, small hardware, oils, lubricants, cleaning solvents, preservatives,

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paints, coatings etc. are in accordance with the equipment manufacturer's drawings, manuals and/or instructions.

2.13.3 Where no particular item is specified or where substitution must be made, the TA must approve the substituted item in writing. The Contractor must provide information about materials used, certificate of grade and quality of various materials to the TA prior to use.

2.13.4 The Contractor must provide all equipment, devices, tools and machinery such as crange, staging, scaffolding and rigging necessary for the completion of the work in this specification.

2.13.5 The Contractor must provide waste disposal services for any oil, oily waste or other hazardous or controlled waste generated by the work of this specification. The Contractor must provide waste disposal certificates for all of the above generated waste and the disposal certificates must indicate that the disposal was in accordance with Federal, Provincial and Municipal regulations in effect.

#### **2.14 GOVERNMENT SUPPLIED MATERIALS & TOOLS**

2.14.1 All tools are Contractor supplied unless otherwise stated in the technical specifications.

2.14.2 Where tools are supplied by the TA they must be returned by the Contractor in the same condition as when they were borrowed. Borrowed tools must be inventoried and signed for by the Contractor on receipt and return to the TA.

2.14.3 Any Government supplied material (GSM) must be received by the Contractor and stored in a secure warehouse or storeroom having a controlled environment appropriate for the equipment as per manufacturer's instructions.

#### **2.15 RESTRICTED AREAS**

2.15.1 The Contractor must not enter the following areas except to perform work as required by the specifications: all cabins, offices, workshops, Engineers' office, Wheelhouse, Control Room, all washrooms, Galley, Mess Rooms, Lounge areas and any other areas restricted by signage.

2.15.2 The Contractor must give the TA 24 hours advance notice prior to working in any accommodation areas or office spaces. This will allow CCG adequate time to move personnel and secure the areas.

#### **2.16 CONTRACTOR INSPECTIONS AND PROTECTION OF EQUIPMENT AND THE WORKSITE**

2.16.1 The Contractor must coordinate an inspection with the TA on the condition and location of items to be removed prior to carrying out the specified work or to gain access to a location to carry out the work.

2.16.2 Any damage incurred as a result of the Contractor's work and that is attributable to the Contractor's work performance must be repaired by the Contractor at no cost to Canada. Materials used in any replacement or repairs must meet the criteria for Contractor supplied material noted above in section Contractor Supplied Materials and Tools.

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- 2.16.3 The Contractor must protect all equipment and surrounding areas from damage. Work areas are to be protected from the ingress of water, welding and blasting grit etc. Temporary covers to work areas must be installed.
- 2.16.4 The Contractor must protect the vessel from the possibility of vermin infestation (insect/mammal). If an infestation does occur during the contract period the Contractor must ensure the vessel is made vermin free and the ship decontaminated before the contract completion.

**2.17 RECORDING OF WORK IN PROGRESS**

- 2.17.1 The TA may record any work in progress using various means including, but not limited to photography or video.

**2.18 LEAD PAINT AND PAINT COATINGS**

- 2.18.1 The Contractor must not use lead based paints.
- 2.18.2 CG ships have been painted with lead based paints in the past and, as a result, some of the Contractor's processes such as grinding, welding and burning may release this lead from the coatings. The Contractor must ensure that coatings in the affected work areas are tested for lead content and that the work is performed in accordance with applicable Federal and Provincial regulations. The Contractor must have in place a Lead Abatement Program in order to deal with any lead paint discovered in the course of this statement of work.
- 2.18.3 The Contractor must provide HC product approval for underwater hull surface paints controlled by HC and the Pest Management Regulatory Agency.

**2.19 ASBESTOS CONTAINING MATERIALS**

- 2.19.1 The Contractor must not use any asbestos containing materials.
- 2.19.2 Handling of any asbestos containing materials must be performed by personnel trained and certified in the removal of asbestos in accordance with Federal, Provincial and Municipal regulations in effect and in accordance with the Fleet Safety Manual. The Contractor must provide the TA with disposal certificates for all asbestos containing material removed from the vessel indicating that the disposal was in accordance with Federal, Provincial and Municipal regulations in effect.

**2.20 REMOVED MATERIALS AND EQUIPMENT**

- 2.20.1 All removed equipment as a result of this specification must remain the property of Canada unless otherwise instructed.

**2.21 WELDING CERTIFICATION**

- 2.21.1 All welding and weld inspection must be in accordance with Lloyd's Registers and CCG Welding Specification CT-043-EQ-EG-001.
- 2.21.2 For any items requiring the application of fusion welding for steel structures, the Contractor or his Sub-Contractors must be certified by the Canadian Welding Bureau to CSA\ACNOR W47.1- latest edition Division, 1.

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- 2.21.3 For any item requiring the application of fusion welding to aluminum structures, the Contractor or his Sub-Contractors must be certified by the Canadian Welding Bureau to CSA\ACNOR W47.2 – latest edition, Division 2.
- 2.21.4 The Contractor must provide documentation to the TA clearly identifying compliance with the welding certification requirements specified herein and the CCG Welding Specification CT-043-EQ-EG-001. Typical documents include but are not necessarily limited to: Letter of Validation, Welding Procedures, Welder Performance Qualification Cards, Inspection Personnel Qualification Cards, etc.
- 2.21.5 For any item requiring the application of fusion welding for stainless steel structures, the Contractor or his Sub-Contractors must be certified in accordance by the Canadian Welding Bureau to with the Canadian Welding Bureau, CSA\ACNOR W47.1 – latest edition, Division 1. Welders, welding operators and welding procedures must meet the requirements of CSA Standard W47.1, and of AWS D1.6.
- 2.21.6 For structural steels over 3 mm in thickness, welding must meet the requirements of CSA Standards W47.1 and W59, except as modified by the CCG Welding Specification CT-043-EQ-EG-001.
- 2.21.7 For structural aluminum over 3 mm in thickness, welding must meet the requirements of CSA Standards W47.2 and W59.2, except as modified by the CCG Welding Specification CT-043-EQ-EG-001.

**2.22 ELECTRICAL INSTALLATIONS**

- 2.22.1 All electrical installations and repairs must be carried out in accordance with the latest revisions of Transport Canada Marine Safety Electrical Standard TP127E and IEEE Standard 45 Recommended Practice for Electrical Installation on Ships.

Spec Item:	Specification	TCMS Field #:
<b>LIST OF ACRONYMS</b>		

**3.0 LIST OF ACRONYMS**

CA	Contract Authority (PWGSC)
CCG	Canadian Coast Guard
CLC	Canada Labour Code
CSM	Contractor Supplied Material
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
DFO	Department of Fisheries and Oceans
DFT	Dry Film Thickness
FSM	Fleet Safety Manual (CCG)
FSR	Factory Service Representative
GSM	Government Supplied Materials
HC	Health Canada
IEEE	Institute of Electrical and Electronic Engineers
IA	Inspection Authority (CCG)
LOA	Length Over All
ME	Main Engine
MSDS	Material Safety Data Sheet
O/B	Overboard
OHS	Occupational Health and Safety
P	Port
PSPC	Public Service and Procurement Canada (PWGSC)
PWGSC	Public Works and Government Services Canada
SSMS	Safety & Security Management System
STBD	Starboard

Spec Item:	Specification	TCMS Field #:
<b>LIST OF ACRONYMS</b>		

- TBS            Treasury Board of Canada Secretariat
- TCMS        Transport Canada Marine Safety
- TA            Technical Authority – Owner’s Representative (CCG)
- WCB         Worker’s Compensation Board
- WHMIS      Workplace Hazardous Material Information System

Spec Item:	Specification	TCMS Field #:
<b>Vessel Particulars</b>		

#### 4.0 VESSEL PARTICULARS

Name: CCGS Private Robertson V.C.

Type: Twin Screw, Mid Shore Patrol Vessel

Class: Near Coastal Class I

Year Built: 2012

##### Principal Dimensions:

Gross Tonnage: 253 tons

Net Tonnage: 75 tons

Construction: Material Steel

Vessel Length: 42.8 m.

Vessel Breadth: 7.00 m.

Vessel Depth: 3.80 m.

Propulsion: Twin screw, Controllable Pitch Propeller, MTU S4000 M93L 12V

Spec Item:	Specification	TCMS Field #:
<b>SERVICES</b>		

## 5.0 SERVICES

### 5.1 GENERAL

- 5.1.1 The Contractor must supply the following services to the vessel for the entire work period and disconnect upon completion of the work period. The Contractor must be responsible for the re-establishment of services if the vessel is moved during the work period.
- 5.1.2 Each of the services noted below must be separately priced in the Contractor's submitted bid.
- 5.1.3 The Contractor must be responsible for supplying all material, hoses, cables etc. and labour required to connect and disconnect the services to the vessel. Unless otherwise stated these services must be available 24 hours a day 7 days a week for the entire contract period.
- 5.1.4 All staging, manlifts, crange, screens, lighting and any other support services, equipment and materials necessary to carry out the work identified in these specifications must be Contractor supplied.
- 5.1.5 All deficiencies resulting from work carried out in this specification must be repaired at Contractor's expense.
- 5.1.6 Prior to the start of disassembly, precautions must be taken to ensure that the reassembly and reinstallation of all system and equipment components will be as per original and in accordance with manufacturer's specifications.
- 5.1.7 The Contractor must report by email all deficiencies as they are identified, to the TA and make recommendations for their prompt remedial action.

### 5.2 BERTHING AND MOORING

- 5.2.1 The berthing and mooring facilities must be suitable for a vessel of this size in local weather, tide and sea conditions. Fenders must be supplied by the Contractor to prevent the vessel from contacting the wharf in local weather, tide and sea conditions.
- 5.2.2 The length of the dock must be a minimum of 90% of the length of the vessel (LOA).
- 5.2.3 During the contract period, when the ship is not in the dry dock, the ship must be berthed at the Contractor's wharf at a safe and secure location with a minimum clearance of one meter under the vessel at extreme low water level conditions to ensure the vessel will not touch bottom.
- 5.2.4 The Contractor must be responsible for all movements of the vessel, including berthing and mooring of the vessel for the contract period and for arrangements and costs for line handlers, tugs and pilots.

### 5.3 MOORING LINES

- 5.3.1 The Contractor must be responsible for providing the necessary mooring lines and labour required to secure the vessel alongside the facilities. Ship's mooring lines are not to be used.

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<b>SERVICES</b>		

#### **5.4 GANGWAYS**

- 5.4.1 Contractor must supply the labour and services required for the installation and removal of two (2) gangways, complete with handrails, safety nets and lighting for the duration of the contract while the vessel is moored.
- 5.4.2 Any movement of the gangway required by the Contractor must be at the expense of the Contractor.

#### **5.5 ELECTRICAL POWER**

- 5.5.1 The Contractor must be responsible for supplying 600 Volt Alternating Current, 3 phase 4 wire with a floating neutral, 60 Hertz, 200 Ampere service electrical power and all the manpower to handle the power cables for the duration of the contract.
- 5.5.2 The vessel's shore power cable and associated plug connection may be used by the Contractor. However, the Contractor is responsible to replace the entire length of cable with an equal quality, size and length of cable should the shore power cable be damaged during the contract period. Damage to the shore power cable also includes damage to the plug-in connections which must be replaced if damaged. Splicing any section of the cable is not acceptable.
- 5.5.3 The Contractor must be responsible for ensuring that the correct phase rotation on a 3 – phase system is established prior to energizing the ship's distribution system. Any changes to the ship's power system to accommodate the Contractor supplied shore power connections must be returned to the original setup by the Contractor upon the disconnection of the Contractor supplied power cable and equipment. All work must be carried out by certified electricians.
- 5.5.4 The Contractor must supply all power to the vessel through a Contractor supplied kilowatt-hour meter. The Contractor must read the kilowatt-hour meter when the connection is made and once again when the power is disconnected. Both readings of the meter must be witnessed by the TA. The Contractor must provide a calibration certificate for the kilowatt-hour meter.
- 5.5.5 The Contractor must quote for a total consumption estimated at 10,000 kw-hr.
- 5.5.6 The final price of kw/hour must be determinate at the end of the contract period, when a meter reading was made. The cost of electricity consumption must be adjusted upwards or downwards on a PWGSC-TPSGC 1379

#### **5.6 FIRE MAIN CHARGING SERVICE**

- 5.6.1 The Contractor must supply a separate and continuous uninterrupted water supply through isolation valves via a calibrated pressure regulator to the ship's fire main system. Supply pressure must be at 80 to 110 psig. Pressure must be maintained at all times to the vessel. The isolation valves must be Contractor supplied and installed in a double block and drain valve arrangement.
- 5.6.2 The Contractor must quote for one cubic meter of non-potable water consumption.
- 5.6.3 The Contractor must supply, at his own cost, the fresh water used in Section 14 (Sewage sludge and black water tanks) and Section 15 (Potable water tanks).

Spec Item:	Specification	TCMS Field #:
<b>SERVICES</b>		

**5.7 CRANAGE AND MANLIFT SERVICES**

5.7.1 The Contractor must quote on the general services of a crane and a man lift, including an operator and a rigger, for the support of the vessel's day-to-day activities, i.e. the moving of stores between the vessel and the Contractor's facilities ashore while the vessel is in the dry-dock and for other requirements from Canada. The Contractor must provide a Log Book of crane and man lift activities which must contain the printed name and signature of the CCG representative that required this service. The duration of time for each use of the crane and man lift services must also be recorded in this log book. The Log Book must be available for viewing by the TA at all times. The Contractor's quote for this service item must consider a total of 20 hours for the duration of the contract. Cranage and man lift services final cost must be adjusted on a PWGSC-TPSGC 1379 form. The Contractor must inform the TA and Contracting agent when 15 hours of usage has been accumulated.

**5.8 GARBAGE REMOVAL**

5.8.1 A garbage container or dumpster of 16 cubic meters must be located adjacent to the vessel. Garbage must be removed from the vessel daily including week-ends and holidays. Ship's personnel must comply with any recycling programs that the Contractor has in place, provided the appropriate containers are made available.

5.8.2 The Contractor must also supply a green bin for food waste. The green bin must also be emptied daily.

**5.9 PORTABLE TOILET**

5.9.1 The Contractor must provide a portable toilet to the vessel front of the wheel house while vessel is on the dry dock. The Contractor must clean the toilet weekly.

**5.10 VESSEL SECURITY**

5.10.1 The Contractor must maintain security for the vessel at all times, including outside of Contractor regular scheduled work hours. Please refer to FSM 8.B.1, Security of the Vessel.

5.10.2 In the event of any 'hot work' procedures being carried out during the day, surveillance rounds must be carried out hourly for at least 3 hours in the surrounding area of the hot work after the beginning of quiet hours.

5.10.3 If the Contractor has additional work shifts scheduled for the vessel during the contract period, the Contractor may start the surveillance rounds at the end of the last shift, recognizing that the Contractor is fully responsible for the safety and security of the vessel at all times.

5.10.4 The Contractor must provide a Log Book on the vessel which must contain the printed name and signature of the security staff upon completion of each round. The Log Book must be available for viewing by the TA at all times.

Spec Item:	Specification	TCMS Field #:
<b>SERVICES</b>		

**5.11 PARKING AT CONTRACTOR’S FACILITY**

5.11.1 The Contractor must provide three (3) parking spaces for exclusive use of the TA and Project Team for duration of the contract period.

**5.12 TELEPHONE LINES AND HIGH SPEED INTERNET**

5.12.1 The Contractor must supply and connect two (2) telephone lines. One line connected to telephone system of the vessel and a separate line in the Chief Engineer's office, on main deck, port side.

5.12.2 The Contractor must supply 1 high speed Internet line accessible from the Chief Engineer's office and from 2 offices with 2 separate telephone lines and receivers for the Coast Guard and Public Works and Government Services Canada (PWGSC) representatives.

5.12.3 The Contractor must supply to the Chief Engineer a list of phone numbers for the shipyard, emergencies, the fire fighting and police services upon arrival of the vessel at the shipyard’s facilities.

5.12.4 All telephone and Internet lines must be in service 24 hours a day, ensuring communication with the exterior of the shipyard at all times. The Contractor must disconnect all telephone lines once the work is completed. Detailed billing must be supplied to the TA.

Spec Item:	Specification	TCMS Field #:
<b>DRY-DOCKING</b>		

**6.0 DRY-DOCKING**

**6.1 IDENTIFICATION**

6.1.1 The Contractor must dry dock the vessel with the dimensions as set out in Section 4 of these specifications.

**6.2 REFERENCES**

- 6.2.1 CCGS Private Robertson V.C. Stability Book
- 6.2.2 Ship Safety's Bulletin No.: 06/1989
- 6.2.3 Docking Plan AF6101-10000-14-01 Sheets 1 and 2

**6.3 TECHNICAL**

- 6.3.1 The Contractor must supply all labour, materials and facilities required for the berthing, mooring, dry-docking and storage of the vessel with the dimensions as outlined in Section 4.
- 6.3.2 The Contractor must prepare blocks and necessary shoring to maintain the true alignment of the vessel's hull and machinery throughout the docking period while the vessel is dry docked.
- 6.3.3 The vessel must be dry-docked such that all docking plugs, transducers, anodes and sea inlet grids are clear and accessible. A minimum clearance of 1.3 meters (4 feet) must be available between the keel and the dry dock. If any hull fittings are covered, the Contractor must be responsible for all labour and materials required to make alternative arrangements to drain tanks and/or move blocks to gain access to areas of specified work. Please refer to Docking plan (AF6101-10000-14). The Contractor must make sure there is enough room between the blocks, the speed log and the echo sounder.
- 6.3.4 The Contractor must record which block setup is used for docking the vessel, as stated in Section 2.12.
- 6.3.5 The Contractor must provide a ground cable between the vessel and the dock while the vessel is dry-docked as per TCMS Ship Safety Bulletin 6/89.
- 6.3.6 The Contractor must supply and erect at least two vessel access-ways in compliance with CLC regulations for the duration of the docking period. The Contractor must be responsible for the safe maintenance of the access-ways.
- 6.3.7 The Contractor must advise the TA of the details of any major changes in the distribution of weights on the vessel while the vessel is dry-docked. This information must be given to the TA prior to the undocking of the vessel.

**6.4 PROOF OF PERFORMANCE**

**6.4.1 Inspections**

6.4.1.1 Before undocking the vessel, the Contractor must install all docking plugs removed in Sections 10.3, 14.3 and 16.3 and replace all gaskets and joints with new ones.

Spec Item:	Specification	TCMS Field #:
<b>DRY-DOCKING</b>		

Water tightness of the plugs must be vacuum tested in the presence of the Lloyd's surveyor and the TA and IA.

- 6.4.1.2 Once the docking plugs have been installed and tested, the Contractor must fill all tanks that were emptied to the same level as they were when the ship was docked.
- 6.4.1.3 The Contractor must ensure that the hull coating system has fully cured and must provide a final report from the FSR prior to un-docking of the vessel.
- 6.4.1.4 Before un-docking the vessel, the Contractor must wash all transducers with a mix of soft liquid detergent and water in order to rid them of contaminants and all marine dirt. Once the transducers are cleaned, the Contractor must rinse the transducers with clear fresh water to make sure that their surface is free of all soap residues.

## 6.5 DELIVERABLES

### 6.5.1 Documentation

- 6.5.1.1 The Contractor must provide the following information to the TA prior to the close of the contract:
  - Kilowatt hour meter readings at connection and at disconnection;
  - Oil Disposal Certificates;
  - FSR hull coating system report.

Spec Item:	Specification	TCMS Field #:
<b>UNDERWATER HULL INSPECTION AND HULL PAINTING</b>		

## 7.0 UNDERWATER HULL INSPECTION AND HULL PAINTING

### 7.1 IDENTIFICATION

- 7.1.1 The Contractor must prepare the underwater hull shell plating for inspection in accordance with Lloyd's Classification Society survey requirements for a vessel of this type.
- 7.1.2 The Contractor must carry out a paint survey of the underwater hull area and repair as directed by the attending hull coating system FRS.
- 7.1.3 The Contractor must modify the sea chest grating as specified in this Section.

### 7.2 REFERENCES

#### 7.2.1 Product Data

- 7.2.1.1 Product Data and Application Sheets for the following International Products:
- Interspeed 640;
  - Intershield 300;
  - Intergard 263;
  - Interthane 990.

#### 7.2.2 Drawings

Drawing Number	Description	Electronic #
AF6097-10000-14	Docking Plan 1-2 and 2-2	
AF6097-10000-01	Midship and Other Sections Plan	
AF6097-10000-03_01	Shell Expansion	
AF6097-10000-04	Watertight Bulkheads Plans	
AF6097-50000-03	Valve Schedule	
AF6097-63100-01_01	Paint Schedule	
AF6097-63300-01	Scheme of Cathodic Protection	
AF6097-89940-01_01	General Arrangement Plan 1-2	
AF6097-89940-01_02	General Arrangement Plan 2-2	
AF6097-89940-02_01	Tank Arrangement & Capacity Plan	
AF6097-89940-03_01	Line Plan	
AF6097-89940-08_01	Draft Marks and Load Line Marks Plan	
J16003-R02, rev. A	CCG 'Hero' Class Patrol Vessels Sea Chest and Grate Modifications Specifications	

#### 7.2.3 Regulations

- 7.2.3.1 Canada Shipping Act, 2001 (2001, c. 26) Hull Inspection Regulations (C.R.C., c.1432)
- 7.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

Spec Item:	Specification	TCMS Field #:
<b>UNDERWATER HULL INSPECTION AND HULL PAINTING</b>		

**7.2.4 Standard**

- 7.2.4.1 Coating Manufacturer's Specifications
- 7.2.4.2 CCG/6016 CCG Fleet Federal identity Program Guide

**7.3 TECHNICAL**

**7.3.1 Underwater Hull Cleaning and Inspection**

- 7.3.1.1 The Contractor must hydro-blast the underwater hull area of the vessel to the deep load line within 24 hours of docking. Hydro-blasting must be done with a minimum of 5,000 PSI pressure.
- 7.3.1.2 Underwater Hull Area ≈ 330 m2 (≈3,552 ft2)
- 7.3.1.3 The Contractor must remove all sea-chest grates and clean the sea chests.  
**NOTE:** Modifications required as per Section 7.3.2.4.
- 7.3.1.4 The Contractor must thoroughly clean all sea chests and sea bays of all marine growth, dirt and debris. All dirt and debris must be removed from the vessel and disposed of ashore in accordance with Federal, Provincial and Municipal regulations in effect.
- 7.3.1.5 The Contractor must bid on the removal and disposal of 1 cubic meter of solid debris from the sea chests and sea bay areas. Final pricing must be pro-rated based on the volume of debris removed using PWGSC 1379 process.
- 7.3.1.6 The Contractor must take 200 ultrasonic thickness measurements of the hull plating. The Contractor must take a minimum of 4 shots per hull plate on the underwater hull area of the vessel. Additional shot per plate must be taken in the way of the propeller areas, rudders and the exhaust overboards. The Contractor must clearly mark the location of each shot taken on the hull expansion plan and the thickness measurements must be presented in a tabular format showing the location and the thickness reading. Ultrasound measurements must be taken by a technician certified to Level II non-destructive testing. The Contractor must provide all staging and man lifts to perform this work
- 7.3.1.7 The Contractor must, at the earliest opportunity, schedule the Lloyd's inspection of the underwater hull structures once the hull has been cleaned. The inspections must be carried out within 48 hours of vessel docking.
- 7.3.1.8 The Contractor must supply all necessary staging and man lifts for the inspection by the Lloyd's surveyor, TA and IA.

**7.3.2 Underwater Hull Repairs following Inspection and Modifications**

- 7.3.2.1 The Contractor must carry out all prescribed repairs resulting from the Lloyd's inspection of the underwater hull. Repair must be in accordance with all applicable standards and regulations including those identified in 2.21. Work for underwater hull repairs must be negotiated using the PWGSC 1379 process.
- 7.3.2.2 The Contractor must quote on 50 meters of plate seam and butt welding to be renewed consisting of the following:
  - removal of the existing coating system;

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- gouging to a depth such that a 1 pass weld will provide the necessary finish profile;
- replacement of the coating system as specified in Section 7.3.3;
- Actual length of welds to be renewed must be determined as part of the underwater hull inspection and the total length renewed must be prorated using the PWGSC 1379 process.

7.3.2.3 All materials used for the prescribed hull repairs must meet or exceed original specifications and must be in compliance with applicable regulations and standards.

**7.3.2.4 Sea Chest Grate Modifications**

7.3.2.4.1 The Contractor must modify the Sea Chest and Grates according to the Lengkeek Vessel Engineering Inc. document J16003-R02, Rev A. **NOTE:** the Contractor must be responsible for ensuring that final dimensions of parts are taken to fit the actual ship’s dimensions. The drawing supplied is approval in concept but final dimensions for all parts must be verified from the vessel.

7.3.2.4.2 All new steel plates and shapes must be minimum Lloyds Grade ‘A’.

7.3.2.4.3 The Contractor must supply all material required, including any material required to complete the work of this specification item.

7.3.2.4.4 All new steel work must be sandblasted and shop primed with a primer compatible with the vessel’s existing paint system. On completion of all welding, all damaged paintwork must be receive a sweep blast to remove any loose material.

7.3.2.5 Upon completion of the prescribed repairs the Contractor must schedule the Lloyd’s inspector for acceptance of the repairs and modifications prior to the application of the hull coating system. The TA and IA must be afforded the opportunity to be present for this inspection.

7.3.2.6 All new and disturbed metal resulting from the prescribed repairs must be prepared and coated in accordance with Section 7.3.3.

**7.3.3 Underwater Hull Coating System Inspection**

7.3.3.1 The Contractor must engage a FSR from International Paint to inspect the underwater hull coating system up to the deep load line and the bow thruster pipe tunnel. The Contractor, in conjunction with the paint FSR and the IA, must record all areas of poor coating adhesion or lack of coating on a copy of the shell expansion plan for the vessel.

7.3.3.2 The Contractor must supply all necessary staging and man lifts for the inspection by the paint FSR, the TA and IA.

7.3.3.3 For bidding purposes the Contractor must quote on the preparation and recoating of 200 square meters of underwater hull surface area. **NOTE:** This area must include the surface area of the two rudders. Based on the underwater hull coating system inspection this area must be prorated using the PWGSC 1379 process. The underwater hull coating system must be renewed as follows:

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- The Contractor must blast the surface of the underwater hull area to be recoated to SSPC-SP10 (Sa2-½ Swedish Standard) with abrasive providing a minimum amplitude of 80 microns.
- All edges to the existing coating must be feathered and blown clean with compressed air prior to the coating application.
- The Contractor must take all necessary steps after blasting the surface area to minimize steel oxidation by applying the coating in accordance with the paint manufacturer's instructions.
- The Contractor must apply one coat of Intershield 300 @ 5 mils;
- The Contractor must apply one coat of Intergard 263@ 4 mils;
- The Contractor must apply one coat of Interspeed 640@ 4 mils.

7.3.3.4 The Contractor must apply the underwater hull coating system in the presence of the paint FSR and particular attention must be given to the environmental conditions required for the application of the coating system with respect to substrate temperatures, dew points and air temperatures required prior to, during and post coating system application as prescribed in the product literature to ensure that the coating system will have both sufficient time and temperature to achieve a full cure. The Contractor must be responsible to ensure that the hull coating system application can be successfully completed in the allotted time of the contract.

7.3.3.4.1 **OPTIONAL ITEM:** The Contractor must supply and install a temporary shelter covering the ship's hull entire area that is to be painted. This shelter is to be ventilated and heated such that the ambient temperature of the steel can be maintained to that required in the coating system specification to allow full curing of the hull coating system. The Contractor must ensure that no combustion gasses exhausted from the heaters enter the shelter and affect the hull coating system chemistry. The shelter must only be dismantled after the full curing of the hull coating system. The Contractor must quote for a shelter and heaters covering a hull section's length of 10 meters. The Contractor must also provide a quotation for a shelter and heaters covering the entire underwater area to 1 meter past the deep water draft marks for the entire vessel.

7.3.3.5 The Contractor must completely remove all existing coatings on surfaces identified for recoating and the debris must be contained and disposed of by the Contractor in accordance with applicable federal, provincial and municipal environmental regulations.

7.3.3.6 The Contractor must protect all underwater areas not requiring grit blasting or recoating from damage, contamination and overspray during surface preparation and recoating. These areas must include all ship side valves, port and starboard propellers, all rudder bearings and covers, bow thruster blades, all anodes, speed logs and all depth sounding appliances.

7.3.3.7 The Contractor must protect all above waterline surfaces, accommodation area, scuttles, port holes, windows, deck machinery, susceptible to damage from surface preparation and coating application overspray.

7.3.3.8 The Contractor must be responsible for the cleanup of all blasting grit, debris and overspray from the vessel up completion of the hull coating system renewal.

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<b>UNDERWATER HULL INSPECTION AND HULL PAINTING</b>		

**7.3.4 Draft Markings (Option)**

- 7.3.4.1 The Contractor must provide a separate pricing for Section 7.3.4 as this item will only be executed if required after the hull coating system inspection.
- 7.3.4.2 The Contractor must have the attending Lloyd’s surveyor and the TA inspect the draft markings on the vessel in conformity with drawing number AF6101-89940-08.
- 7.3.4.3 The Contractor must renew the following draft markings on the vessel by grit blasting clean each draft mark to bare steel, re-punch the outline of the draft mark and applying the following coating system:
  - The Contractor must apply one coat of Intershield 300 @ 5 mils;
  - The Contractor must apply one coat of Intergard 263@ 4 mils;
  - The Contractor must apply one coat of Interspeed 640@ 4 mils.
  - The Contractor must supply and apply 2 coats of International Interthane 990 white (White RAL 9003) to each of the below mentioned markings within the punched outline markings. The renewal of the draft marks must be done after the final painting and curing of the underwater hull coating.
- 7.3.4.4 Forward: Both Port and Starboard side draft markings including the 2.4M and 1.6M meter markings for a total of 10 markings to be renewed.
- 7.3.4.5 Aft: Both Port and Starboard side draft markings including the 2.0M and 2.8M meter markings for a total of 10 markings to be renewed.
- 7.3.4.6 The Contractor must renew the Port and Starboard Plimsoll markings at mid-ship including all load lines and mid-ship markings.
- 7.3.4.7 When renewing the draft markings the Contractor must ensure that the draft markings are the correct height and obliqueness to the hull, representing the true draft of the vessel and that these are acceptable to the attending Lloyd’s Inspector.

**7.4 PROOF OF PERFORMANCE**

- 7.4.1 The Contractor must afford the TA the opportunity to witness the Lloyds inspection of the underwater hull prior to and following all prescribed repairs.
- 7.4.2 Testing/Trials**
  - 7.4.2.1 The Contractor must perform nondestructive testing as requested by the attending Lloyds Surveyor on all completed underwater hull repairs. The Contractor must quote for a total of 10 nondestructive tests. If the number of tests varies from the quoted amount, their cost must be negotiated using PWGSC 1379 process.
  - 7.4.2.2 The Contractor must provide pricing for one X-Ray weld inspection and pricing for one die penetrant inspection performed by a certified technician for Level 2 Non-Destructive testing.
  - 7.4.2.3 The Contractor must perform and record Wet Film Thickness readings during the application of each underwater coating system layer as required by the FSR. The readings and their locations must be contained in the final report.

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<b>UNDERWATER HULL INSPECTION AND HULL PAINTING</b>		

**7.4.3 Certification**

- 7.4.3.1 The Contractor must provide, to the TA, all material test certificates for materials used to effect hull repairs identified in the Lloyds underwater hull inspection as well as the materials used for the modification of the sea chest grating.
- 7.4.3.2 The Contractor must provide the material certification for the underwater hull coating system applied.

**7.5 DELIVERABLES**

**7.5.1 Documentation (Reports/Drawings/Manuals)**

- 7.5.1.1 The Contractor must submit to the TA, in PDF format, a copy of drawing AF6095-10000-03 Shell Expansion with the location of all ultrasound readings taken and the measurements obtained.
- 7.5.1.2 The Contractor must submit to the TA, in PDF format, a copy of drawing AF6095-10000-03 Shell Expansion outlining in RED all proposed plate repairs following the Lloyd’s underwater hull inspection and prior to carrying out the prescribed repairs.
- 7.5.1.3 The Contractor must provide a coating application report from the Hull coating system FSR to the TA providing the details of the coating application process as completed by the Contractor. The report must include details of all environmental conditions at the time any hull coatings were applied and at which areas on the hull the coating was applied. This must include but not be limited to the dry and wet bulb temperatures, relative humidity, dew point and the times when painting was started and stopped. Also to be included in the report must be the temperature of the product at application time as well as the substrate temperature the coating system was applied on.
- 7.5.1.4 The Contractor must prepare the reports as per Section 2.12 of this specification and these must be available to the TA prior to the completion of the contract.

Spec Item:	Specification	TCMS Field #:
<b>ANODES</b>		

**8.0 ANODES**

**8.1 IDENTIFICATION**

8.1.1 The Contractor must replace all wasted and/or defective hull anodes and corrosion protection on the underwater hull of the vessel.

**8.2 REFERENCES**

**8.2.1 Manuals:**

- 8.2.1.1 Hydraulic Thruster (PKK 24 TRAC (24) 75 kw) Installation and Operation
- 8.2.1.2 24 TRAC ASSY drawing # 29351

**8.2.2 Drawings:**

Drawing Number	Drawing Title	Electronic File Name
AF6097-89940-01_01	GENERAL ARRANGEMENT PLAN 1 2	
AF6097-89940-01_01	GENERAL ARRANGEMENT PLAN 2 2	
AF6097-63300-01	Scheme of Cathodic Protection	
6097-O-6330-001	Anodes Plan	
AF6094-25600-02	Sea Chest Arrangement	

**8.2.3 Regulations**

- 8.2.3.1 Canada Shipping Act, 2001 (2001, c. 26) Hull Inspection Regulations (C.R.C., c.1432)
- 8.2.3.2 Lloyd’s Register, Rules & Regulations for the Classification of Special Service Craft

**8.3 TECHNICAL**

**8.3.1 General**

- 8.3.1.1 The Contractor must remove (by grinding or otherwise) all remaining metal from the anode connections to the base metal surface after the anode removals and before the installation of new anodes.
- 8.3.1.2 The Contractor must protect newly installed anodes if they are installed before the application of the hull coating system.
- 8.3.1.3 The Contractor must remove all anode protections after the completion of the coating system application.
- 8.3.1.4 Where anodes are installed after the application of the hull coating system, the hull coating system must be touched up in any areas it is damaged as a result of heat application due to the installation of the new anodes.

Spec Item:	Specification	TCMS Field #:
<b>ANODES</b>		

**8.3.2 Hull Anodes**

- 8.3.2.1 The Contractor must bid on replacing all sacrificial hull anodes MM28AB (20 in total).
- 8.3.2.2 Replacement hull anodes, type MM 28AB, will be provided by Canada.
- 8.3.2.3 The Contractor must fit new anodes in the same locations as the removed anodes.

**8.3.3 Sea Chest and Sea Bay Anodes**

- 8.3.3.1 The Contractor must replace three anodes, one in each of the three sea chests.
- 8.3.3.2 Replacement anodes, type MM 26AA, will be provided by Canada.

**8.3.4 Bow Thruster Tunnel**

- 8.3.4.1 The Contractor must replace all four Bow Thruster Tunnel anodes, two on each side of the propeller.
- 8.3.4.2 Replacement anodes, type MM 26AA, will be provided by Canada.

**8.3.5 Bow Thruster Anodes**

- 8.3.5.1 The Contractor must replace the two cone shaped anodes, one on each side of the propeller.
- 8.3.5.2 Replacement anodes (Type TRAC 24) will be provided by Canada.
- 8.3.5.3 The Contractor must install the cone shaped anodes in accordance with Manual No.: 29351 24 TRAC ASSY.

**8.4 PROOF OF PERFORMANCE**

**8.4.1 Inspection**

- 8.4.1.1 The Contractor must afford the TA and the IA the opportunity to witness the Lloyd's inspection of the anodes prior to, and following all prescribed renewals.
- 8.4.1.2 The Contractor must afford the TA and the IA the opportunity to verify the installation of the new anodes in the sea chests prior to the closing of the sea chest grating.

**8.5 DELIVERABLES**

**8.5.1 Documentation (Reports/Drawings/Manuals)**

- 8.5.1.1 The Contractor must submit to the TA a detailed list of all of the anodes replaced as described in this Section. The list must be submitted to the TA prior to the close of the Contract.

Spec Item:	Specification	TCMS Field #:
<b>THROUGH HULL FITTING SURVEY &amp; ISOLATION KIT INSTALLATION</b>		

## 9.0 THROUGH HULL FITTING SURVEY & ISOLATION KIT INSTALLATION

### 9.1 IDENTIFICATION

- 9.1.1 The Contractor must remove, disassemble, clean and layout for Lloyds inspection all storm valves and sea connections.
- 9.1.2 The Contractor must install new Canada supplied valve isolation kits to those valves identified in this Section.
- 9.1.3 The Contractor must prepare and execute a test and trials plan for the testing of all through hull fittings.

### 9.2 REFERENCES

#### 9.2.1 Equipment Data

##### 9.2.1.1 List of Sea Water Valves: (Total 10)

ID #	Description	Location	Diameter (mm)
V256001	Main Isolation Valve (P)	Engine Room FWD	250
V256002	Main Isolation Valve (Stbd.)	Engine Room FWD	250
V256003	FWD Sea Chest Isolation Valve	Bow Thruster RM	100
V256007	Port Sea Chest Circulation Valve	Engine Room FWD	100
V256008	Stbd Sea Chest Circulation Valve	Engine Room FWD	100
V256010	Port Sea Chest Vent	Engine Room FWD	150
V256011	Stbd Sea Chest Vent	Engine Room FWD	150
V256012	FWD Sea Chest Vent Valve	Bow Thruster RM	65
V256013	P Sea Strainer outlet To replace (valve provided by the ship)	Engine Room FWD	250
V256014	Stbd Sea Strainer outlet To replace (valve provided by the ship)	Engine Room FWD	250

Spec Item:	Specification	TCMS Field #:
<b>THROUGH HULL FITTING SURVEY &amp; ISOLATION KIT INSTALLATION</b>		

**9.2.1.2 List of Storm Valves (Total 4)**

ID #	Description	Location	Diameter (mm)
V526023	Fuel Oil Spill LCR O/B Discharge		50
V526029	HVAC/DK LCR O/B Discharge		50
V526031	Wet Gear RM O/B Discharge		50
V593091	Sewage Treatment Plant O/B Disc		50

**9.2.1.3 List of Overboard Valves: (Total 12)**

ID #	Description	Location	Diameter (mm)
V256032	P O/B Discharge	Engine Room	150
V256035	Stbd O/B Discharge	Engine Room	150
V256065	ACU O/B Discharge	Bow Thruster Compt.	65
V256114	Stbd ME Gear Box O/B Discharge	Engine Room	40
V256115	P ME Gear Box O/B Discharge	Engine Room	40
V256131	Cyclone Filter O/B Discharge	Engine Room	25
V520018	Bilge O/B	Engine Room	50
V520019	MMR Bilge O/B	Engine Room	50
V520056	Bilge Eductor O/B	Engine Room	80
V593071	O/B Discharge		32
V530001	R/O Unit O/B Discharge		
V555009	Fire Main Drain Overboard		

Spec Item:	Specification	TCMS Field #:
<b>THROUGH HULL FITTING SURVEY &amp; ISOLATION KIT INSTALLATION</b>		

**9.2.1.4 List of Blow down Air Valves (Total 15)**

ID #	Description	Location	Diameter (mm)
V551061	Blow down Air Sea Chest (P)		25
V551062	Blow down Air Sea Chest (Stbd.)		25
V551070	Blow down Air RO Unit		15
V551074	Blow down Air FWD Sea Chest	Bow Thruster Room	25
V551075	Blow down Air Bilge O/B valve		15
V551076	Blow down Air HVAC ACU O/B		15
V551089	Blow down Air Fire Water O/B		15
V551126	Blow down Air Gear Box P O/B		15
V551127	Blow down Air Gear Box Stbd O/B		15
V551128	Blow down Air Cyclone Filter O/B		15
V551073	Blow down Air AMR Bilge O/B	AMR (Port)	
V551071	Blow down Air MMR Bilge O/B	MMR (Port)	
V551068	Blow down Air Sewage O/B	MMR (Port)	
V551063	Blow down Air Port O/B	MMR (Port)	
V551064	Blow down Air Stbd O/B	MMR (Stbd)	

**9.2.1.5 Valves Requiring Isolation Kit Installations (20)**

ID #	Description	Location	Diameter (mm)
V256007	Port Sea Chest Re-Circulation Valve	Engine Room FWD	100
V256008	Stbd Sea Chest Re-Circulation Valve	Engine Room FWD	100
V256013	Port Sea Strainer Outlet	Engine Room FWD	250
V256014	Stbd Sea Strainer Outlet	Engine Room FWD	250
V256043	Port Main Engine Exhaust	Steering Gear Compt.	65
V256049	Stbd Main Engine Exhaust	Steering Gear Compt	65
V256045	Port Auxiliary Generator Exhaust	Steering Gear Compt	50

Spec Item:	Specification	TCMS Field #:
<b>THROUGH HULL FITTING SURVEY &amp; ISOLATION KIT INSTALLATION</b>		

V256047	Stbd Auxiliary Generator Eexhaust	Steering Gear Compt	50
V256018	Port Main Engine Cooling Water Supply	Engine Room	200
V256022	Stbd Main Engine Cooling Water Supply	Engine Room	200
V256032	Port ME O/B Discharge	Engine Room	150
V256035	Stbd ME O/B Discharge	Engine Room	150
V256114	Stbd ME Gear Box O/B Discharge	Engine Room	40
V256115	Port ME Gear Box O/B Discharge	Engine Room	40
V256131	Cyclone Filter O/B Discharge	Engine Room	25
V520019	AMR Bilge O/B	Engine Room	50
V520056	Forward Bilge Ejector O/B		80
V256136	Refrigeration Condenser Sea Water Supply		20
V256096	Port ME Sea Water Supply Check Valve		200
V256095	STBD ME Sea Water Supply Check Valve		200

### 9.2.1.6 Manuals

Manual Number	Manual Name
1	Private Robertson Valve Galvanic Corrosion Survey
2	Valve co valve isolation installation literature

### 9.2.2 Drawings

Drawing Number	Description	Electronic File
AF6101-25600-01	As Build Cooling Water System	

Spec Item:	Specification	TCMS Field #:
<b>THROUGH HULL FITTING SURVEY &amp; ISOLATION KIT INSTALLATION</b>		

AF6101-52000-01	Bilge Drainage & Dewatering System	
AF6101-52600-01	Scuppers and Drains	
AF6101-55100-01	Compressed Air System	
AF6101-59300-02	Black Grey Water & Sanitary System	

### 9.2.3 Regulations

- 9.2.3.1 Canada Shipping Act 2001, Hull Inspection Regulations (C.R.C., c. 1432)
- 9.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

### 9.2.4 Standards

- 9.2.4.1 N/A

### 9.2.5 Quality Assurance Standards

- 9.2.5.1 Fleet Safety Manual Procedure – 7.B.5 Lockout and Tagout

## 9.3 TECHNICAL

- 9.3.1 The Contractor must ensure all applicable safety precautions are implemented prior to the start of work, including equipment and system lock outs and tag outs on all machinery and systems affected by the work of this specification item.
- 9.3.2 The Contractor must ensure that all interference items, equipment and system are recorded prior to the start of disassemble to ensure that all parts are reassembled and reinstalled as per original. Where systems need to be disassembled (if they are interference items) the Contractor must list these and must provide proof of operational tests as part of system recommissioning after this specification work is completed.
- 9.3.3 The Contractor must remove, disassemble, clean and layout for Lloyd's inspection all hull penetration valves listed in Section 9.2.1.1 to 9.2.1.4. The Contractor must afford the TA and IA the opportunity to partake in this inspection.
- 9.3.4 The Contractor must visually inspect all removed valves and report by email to the TA and IA all deficiencies as they are identified and make recommendations for remedial actions.
- 9.3.5 Following inspection, the Contractor must by machining or lapping reseal all original to provide a full line of contact between the valve lid and the valve seat.
- 9.3.6 The Contractor must reassemble all valves using new CSM packings and gaskets that are suitable for the intended service of the valve.
- 9.3.7 The Contractor must supply and install new flange gaskets for all flanges disturbed as a result of the valve servicing work. The new flange gasket material must be of a material suitable for the intended service of the system.

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9.3.8 The Contractor must install the valve isolation kits (flanges and bolt isolation kits) to the valves identified in Section 0. New isolation kits will be supplied by Canada.

## 9.4 PROOF OF PERFORMANCE

### 9.4.1 Inspections

9.4.1.1 The Contractor must afford the TA and the IA the opportunity to view all of the disassembled valves as listed in Section 9.2.1.

9.4.1.2 The Contractor must provide the TA and the IA the opportunity to witness the installation of all valves and the re-installation of all removed interference items prior to the commencements of tests and trials.

### 9.4.2 Testing/Trials

9.4.2.1 The Contractor must prepare and provide a detailed test and trials plan to the TA and the IA on how all valves listed in Section 9.2.1.1 to 9.2.1.4 will be tested.

9.4.2.2 The Contractor must test all valves listed in Section 9.2.1.1 to 9.2.1.4 for sealing integrity at their maximum system operating pressures following the reinstallation of valves. All leaks must be repaired at the Contractor's expense prior to the un-docking of the vessel.

9.4.2.3 The Contractor must perform an isolation test on all valves identified in Section 0 to ensure that the valve isolation kits are functioning as intended. Test instrument must be Type Tinker Razor RF-IT.

9.4.2.4 The Contractor must perform the above listed tests in the presence of the attending Lloyd's Surveyor and provide the TA and IA the opportunity to be present.

9.4.2.5 The Contractor must prepare and provide a detailed test and trials plans to the TA and the IA that lists all of the interference items and systems removed as part of the work of this specification item. The test and trials plan must detail how system integrity will be tested and proven. These tests and trials must be completed in the presence of the TA and IA.

### 9.4.3 Certification

9.4.3.1 The Contractor must ensure that all replacement valves are Lloyd's certified and certificates are included as part of the procurement cycle. If required by the attending Lloyd's surveyor, the Contractor must also provide material certificates for the gasket materials used in the packings and flanges of the valves.

## 9.5 DELIVERABLES

### 9.5.1 Documentation (Reports/Drawings/Manuals)

9.5.1.1 The Contractor must provide a paper and electronic copy in PDF format of all certificates for new valves installed.

9.5.1.2 If required by the attending Lloyd's survey, the Contractor must provide material certificates for the gasket material used for the gasket material in the packing and

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flanges of the valves. The Contractor must provide one paper copy and one electronic copy in PDF format.

- 9.5.1.3 The Contractor must provide the TA with a report detailing all work carried out on the valves identified in Section 9.2.1.1 to 9.2.1.4. This report must detail all “As-found” conditions of the valves, any measurements taken on the valves, any machining/lapping performed and the identification of valves replaced with new units. It must also detail the isolation values of the valves that were fitted with valve isolation kits.
- 9.5.1.4 The Contractor must provide all documentation of Section 9.5 prior to the close of the contract.

Spec Item:	Specification	TCMS Field #:
<b>RUDDER, RUDDER BEARINGS &amp; SKEG INSPECTIONS</b>		

## 10.0 RUDDER, RUDDER BEARINGS & SKEG INSPECTIONS

### 10.1 IDENTIFICATION

10.1.1 The Contractor must prepare both rudders, their associated rudder stocks and rudder bearings for a Lloyd's survey.

### 10.2 REFERENCES

#### 10.2.1 Manual

NO.	Description
1	Jastram Steering System Installation and Service Manual

#### 10.2.2 Drawings

Drawing Number	Description	Electronic File
AF6101-56100-02	Steering System Schematic of the Hydraulic System	
AF6101-56100-03	Steering Gear Room Arrangement Plan	
AF6101-10000-11	Rudders construction Plan Sheet 1 of 2	
AF6101-10000-11	Rudders construction Plan Sheet 2 of 2	
TG-28380	Thordon SXL Steering wear pads assembly	

#### 10.2.3 Regulations

- 10.2.3.1 Canada Shipping Act, 2001: Marine Machinery Regulations (SOR/90-264)
- 10.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft
- 10.2.3.3 CAN/ONGC-48.9712

### 10.3 TECHNICAL

10.3.1 The Contractor must ensure all applicable safety precautions including equipment lock outs and tag outs are implemented prior to the start of work.

#### 10.3.2 Rudder, Rudder Stock and Rudder Bearing Carrier Inspections

10.3.2.1 The Contractor must disconnect and remove the rudders from the vessel. Where electrical circuits and position switches are removed or disconnected, the connections must be clearly marked and recorded and all disconnected wiring must be marked and the connections recorded. Where linkages are fitted, their

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fitted distance must be marked and recorded prior to disconnection such that these distances can be re-established upon re-assembly.

- 10.3.2.2 The Contractor must ensure, prior to the start of disassembly, that precautions are taken to ensure the reassembly and reinstallation of all system and equipment components as per original and in accordance with manufacturer's specifications.
- 10.3.2.3 The Contractor must report by email all deficiencies as they are identified, to the TA and make recommendations for their prompt remedial action.
- 10.3.2.4 The Contractor must take and record all rudder bearing clearances prior to removal of rudder the stocks.
- 10.3.2.5 The Contractor must disconnect and remove the two rudders and rudder stock assemblies. These must be laid out for a Lloyd's survey.
- 10.3.2.6 The Contractor must visually inspect the rudders and must note any defects. On each rudder the Contractor must remove the docking plug and perform a pressure test of not more than 3 psi for 1 hour. This test must be witnessed by attending Lloyd's surveyor and the TA. The PWGSC 1379 process must be used to deal with any repairs to the rudders.
- 10.3.2.7 The Contractor must visually inspect the rudder stocks for any defects, the diameters must be measured and recorded. Recommendations for repairs must be made accordingly.
- 10.3.2.8 The Contractor must inspect the rudder stock key and keyway for any defects using NDT LP Level II testing in full compliance with CAN/ONGC-48.9712. All findings must be recorded and delivered to the TA as soon as practical.
- 10.3.2.9 The Contractor must visually inspect the top rudder bearings and bearing fasteners of both rudders for any defects and the findings must be recorded and submitted to the Lloyd's surveyor and the TA. The PWGSC 1379 process must be used to deal with any repairs necessary.
- 10.3.2.10 The Contractor must visually inspect the rudder carrier bearings for both rudder stocks for any defects and the findings must be recorded and submitted to the Lloyd's surveyor and the TA. If any unplanned work is required, it must be negotiated using from PWGSC 1379, as applicable.
- 10.3.2.11 Following the inspection the Contractor must reassemble both rudders, rudder stocks and carrier bearings as per original and in accordance with manufacturer's specifications. The Contractor must re-install the rudders and reconnect all equipment and items removed during the removal of the rudders.
- 10.3.2.12 Before installation of the rudders, the Contractor must replace the Nylon protection plates on the rudders. The Contractor must remove the existing plates and install new Thordon plates, as described in drawing TG-28380 (Thordon SXL Steering wear pads assembly), taking care to correctly adjusting the holding screws. The Contractor must machine the rudder bearing hold ring to allow the Thordon plate to be 2mm higher than the ring on final installation. The Thordon SXL plate is supply by Canada, the Contractor must supply all other installation material.

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- 10.3.2.13 The Contractor must exercise care to ensure that all values recorded prior to disassembly are achieved during re-assembly and that all electrical connections are re-established as recorded.
- 10.3.2.14 The Contractor must ensure that the tiller achieves a proper fit and that the tiller nut is hardened up in the presence of the TA.
- 10.3.2.15 The Contractor must prepare a test and trials plan for the full functional test of the steering gear and rudders. This functional test must be carried out before the undocking of the vessel so that the full movement of the rudders can be observed.
- 10.3.3 Rudder Skeg Inspections**
- 10.3.4 The Contractor must ensure that all applicable safety precautions are taken to collect all residual liquid or other filling mixture inside in the skegs before the docking pugs are removed.
- 10.3.5 The Contractor must remove the docking plugs from the PORT and STBD skegs, drain all residual liquid or other filling mixture and must perform a pressure test of not more than 3 psi for 1 hour which is to be witnessed by the attending Lloyd's surveyor and the TA.
- 10.3.6 The Contractor must float coat both skegs with a water based corrosion preventative and then drain it before installing the docking plugs.

#### **10.4 PROOF OF PERFORMANCE**

##### **10.4.1 Inspections**

- 10.4.1.1 The Contractor must afford the attending Lloyd's surveyor and the TA the opportunity to inspect all disassembled components following disassembly and cleaning.

##### **10.4.2 Testing/Trials**

- 10.4.2.1 The Contractor must perform a functional test on the rudder system, verifying that the rudders move hard over to hard over and perform as per the specifications of the installation manual. This test must be carried out before the vessel is undocked.
- 10.4.2.2 The Contractor must conduct a dock trial where both the rudders systems are tested for correct operation in both directions and to ensure that proper rudder angle indications are received on all system gauges.
- 10.4.2.3 The Contractor must prepare a test and inspection plan for the sea trials of the steering gear system. Sea trials for the steering gear system must include hard over to hard over maneuvers of both rudders in the full follow-up mode and the non-follow-up mode. These trials must be conducted at various speeds of the vessel from zero speed to full ahead and astern conditions.
- 10.4.2.4 The Contractor must correct any defects, at no cost to Canada, that are a result of any work carried out by the Contractor on this specification Section.

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**10.5 DELIVERABLES**

**10.5.1 Documentation (Reports/Drawings/Manuals)**

10.5.1.1 The Contractor must prepare and submit to the TA prior to the close of the contract and in accordance with Section 2.12 a comprehensive report of all inspections including all findings, recommendations, test results and recorded measurements.

Spec Item:	Specification	TCMS Field #:
<b>ANCHOR, CHAIN &amp; CHAIN LOCKER INSPECTIONS</b>		

## 11.0 ANCHOR, CHAIN & CHAIN LOCKER INSPECTIONS

### 11.1 IDENTIFICATION

- 11.1.1 The Contractor must range the anchor and anchor chain for a Lloyd's survey.
- 11.1.2 The Contractor must clean and prepare the chain locker for a Lloyd's structural inspection.

### 11.2 REFERENCES

#### 11.2.1 Drawing

Drawing Number	Drawing Title	Electronic File
AF6101-58100-01	Anchor System Arrangement Plan	

#### 11.2.2 Regulation

- 11.2.2.1 Canada Shipping Act, 2001: Marine Machinery Regulations (SOR/90-264)
- 11.2.2.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

#### 11.2.3 Standard

- 11.2.3.1 ISO 9712:2012, International Standards for Qualification and Certification of NDT Personnel
- 11.2.3.2 ANSI/ASNT CP-189-2011, ASNT Standard for Qualification and Certification of NDT Personnel

### 11.3 TECHNICAL

#### 11.3.1 Anchor and Anchor Chain Inspections

- 11.3.1.1 The Contractor must arrange for the lowering and raising of the anchor and chain without hydraulic power being available for operating the anchor winch.
- 11.3.1.2 The Contractor must ensure that prior to the start of disassembly, precautions are taken to ensure the reassembly and reinstallation of all system and equipment are as per original and in accordance with manufacturer's specifications.
- 11.3.1.3 The Contractor must disconnect the bitter end of the anchor chain in the chain locker and must range the anchor and anchor chain such that they can be cleaned by hydro-blasting at 5000 PSI. This must be followed by a thorough visual inspection of the anchor and chain for indications of excessive wear, wastage and other defects. The Contractor must take measurements at locations indicated by the attending Lloyd's surveyor to measure various chain links, checking for elongations of the chain. All evidence of defects must be recorded and must be brought to the attention of the attending Lloyd's surveyor and the TA.

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<b>ANCHOR, CHAIN &amp; CHAIN LOCKER INSPECTIONS</b>		

- 11.3.1.4 The Contractor must inspect the anchor eye and anchor shackles using liquid dye penetrant testing performed by a NDT LPT Level II certified Technician. The PWGSC 1379 process must be used to deal with any necessary repairs.
- 11.3.1.5 The Contractor must disconnect the first 2 shots of anchor chain from the anchor shackle and these must be added to the end disconnected from the chain locker. The Contractor must supply all material necessary to perform this disconnection and reconnection.
- 11.3.1.6 Following all repairs, replacements, and anchor shot swaps the anchor chain must be painted and marked as follows:
- All shot joining shackles must be painted red;
  - The adjacent shackles on either side of the joining shackle must be painted white. The number of shackles painted white must represent the numbered shot of chain. When the paint is cured these shackles must also be marked with stainless steel wire of 0.050 diameter.
- 11.3.1.7 The Contractor must reconnect the bitter end of the chain once the work in section 11.3.2 has been completed. Following this, the Contractor must stow the anchor chain and anchor.
- 11.3.2 Chain Locker Inspection**
- 11.3.2.1 The Contractor must open the chain locker and it must be ventilated and certified for entry. The certificate of entry must be valid for entry for the duration of the work and the survey.
- 11.3.2.2 The Contractor must pressure wash the chain locker interior with a minimum of 5000 psi. The Contractor must bid on removing and disposing of ashore in accordance with federal and provincial regulations 100 liters of liquid waste and 10 liters of sludge. This must not include the water used for the cleaning of the chain locker which must be the responsibility of the Contractor.
- 11.3.2.3 The Contractor must clean the chain locker bilge suction after removing the bottom perforated plate of the chain locker.
- 11.3.2.4 If, following the Lloyd's survey, there is a need to make structural repairs in the chain locker these must be done using the PWGSC 1379 process to deal with any necessary repairs.
- 11.3.2.5 The Contractor must bid on replacing 5 m<sup>2</sup> of the chain locker coating system consisting of 1 coat of Intershield 300 Aluminum to a Dry Film Thickness of 5 mil followed by 1 coat of Intershield 300 Bronze to a Dry Film Thickness of 5 mil.
- 11.3.2.6 The Contractor must allow sufficient time in the contract period for the full curing of the chain locker coating system.
- 11.3.2.7 The Area of coating system renewal in the chain locker must be prorated using the PWGSC 1379 process in case the surface are needs to be adjusted up or down.
- 11.3.2.8 The Contractor must install a new manhole cover gasket before the final closing of the chain locker.

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	Specification	
<b>ANCHOR, CHAIN &amp; CHAIN LOCKER INSPECTIONS</b>		

## 11.4 PROOF OF PERFORMANCE

### 11.4.1 Inspections

- 11.4.1.1 The Contractor must schedule a survey of the anchor and anchor chain by the attending Lloyd's surveyor and afford the TA the opportunity to witness the inspection. The Lloyd's inspection must be to obtain a survey credit for the anchor and anchor chains.
- 11.4.1.2 The Contractor must schedule a survey of the chain locker by the attending Lloyd's surveyor and afford the TA the opportunity to witness the inspection in order to determine if any structural or coating repairs are required. The Lloyd's inspection must be to obtain a survey credit for the chain locker space.

### 11.4.2 Testing/Trials

- 11.4.2.1 The Contractor must perform an operational test of the anchor windlass, following the stowage of the anchor chain and the anchor onboard the vessel. This operational test must be done after the undocking of the vessel and prior to sea trials. The test must consist of walking the anchor out using the windlass when hydraulic power is available, lowering the anchor into the water and retrieving the anchor using the windlass. The Contractor must verify that the anchor and anchor chain are retrieved correctly and that the anchor and chain are capable of being stowed correctly. The Contractor must afford the attending Lloyd's surveyor and the TA the opportunity to witness the test.

### 11.4.3 Certification

- 11.4.3.1 If the Contractor is required to use new parts for the re-joining of the anchor shots, certificates suitable for Lloyd's survey credits must be provided to the attending surveyor and to the TA.

## 11.5 DELIVERABLES

### 11.5.1 Documentation (Reports/Drawings/Manuals)

- 11.5.1.1 The Contractor must prepare and submit a report to the TA of all work done to the anchor, anchor chains and the chain locker, including all of the measurements taken, the results of the NDT tests and any certificates available for the parts used for rejoining the anchor chain shots. This report must be available before the end of the contract in accordance with Section 2.12.

Spec Item:	Specification	TCMS Field #:
<b>PROPELLER HUBS, SHAFT CLEARANCES &amp; SHAFT SEALS</b>		

## 12.0 PROPELLER HUBS, SHAFT CLEARANCES & SHAFT SEALS

### 12.1 IDENTIFICATION

- 12.1.1 The Contractor must open up the Port and Starboard shaft seals for a Lloyd's survey.
- 12.1.2 The Contractor must take the wear down readings for the Port and Stbd stern tube bearings, the intermediate bearings and the aft spectacle frame bearings.
- 12.1.3 The Contractor must remove the PORT and STBD shafts for inspection by the attending Lloyd's surveyor.
- 12.1.4 This specification section must be done in conjunction with Section 10 – Rudder, Rudder Bearing & Skeg Inspections.

### 12.2 REFERENCES

#### 12.2.1 Manuals

NO.	Description	Electronic File
1	Kamewa CP-A D Installation Manual (10Sooo239/49341-E)	
2	Simplan Seal Manual	

#### 12.2.2 Drawings

Drawing Number	Drawing Title	Electronic File
6097-24300-01_1	Shaft Line arrangement	

#### 12.2.3 Regulations

- 12.2.3.1 Canada Shipping Act, 2001: Marine Machinery Regulations (SOR/90-264)
- 12.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft.

## 12.3 TECHNICAL

### 12.3.1 Propeller Shaft Seals

- 12.3.1.1 The Contractor must ensure that all applicable safety precautions including equipment lock outs and tag outs are implemented prior to the start of work.
- 12.3.1.2 The Contractor must ensure that, prior to the start of disassembly, precaution are taken to ensure the reassembly and reinstallation of all system and equipment must be as per original and in accordance with manufacturer's specification.
- 12.3.1.3 The Contractor must release the inboard side of the PORT and STBD shaft seals. The Contractor must protect the sealing surfaces of the shaft seals as described in the Simplan Seal Manual.

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<b>PROPELLER HUBS, SHAFT CLEARANCES &amp; SHAFT SEALS</b>		

12.3.1.4 The Contractor must engage the services of a FSR from Simplex Americas LLC to dismantle the shaft seals, take the required measurements and reassemble the shafts seals after the Lloyd's survey. The Contractor must include all costs related to the Simplex FSR in the bid proposal.

12.3.1.5 The Simplex FSR must re-install the PORT and STBD shaft seals after the necessary work in this specification has been completed. The FSR must record measurements and must tension the shaft seals in accordance with the Simplan Manual.

**12.3.2 Propeller Shaft Clearances**

12.3.2.1 The Contractor must take the clearance reading between shaft and FWD Stern Tube Bearings while the shaft seal is dismantled. Bearing clearance readings must be taken at four places for both the PORT and STBD shafts as follows:

- Top (12 o'clock position);
- Bottom ( 6 o'clock);
- Port (9 o'clock position);
- Stbd (3 o'clock position);

12.3.2.2 The Contractor must open the Aft Stern Tube Bearing covers from PORT and STBD sides. Bearing Clearance readings must be taken in four places for both the PORT and STBD shafts as follows:

- Top (12 o'clock position);
- Bottom ( 6 o'clock);
- Port (9 o'clock position);
- Stbd (3 o'clock position);

12.3.2.3 The Contractor must reinstall the Aft Stern Tube Bearing covers on the PORT and STBD shaft lines after the readings have been taken. The Contractor must lock the screws in their original position using the original screw lock style.

12.3.2.4 The Contractor must remove the Rope Guards with Net Cutters from PORT and STBD sides of the AFT Bracket Bearing. Bearing clearance readings must be taken at four places for both the PORT and STBD shafts as follows:

- Top (12 o'clock position);
- Bottom ( 6 o'clock);
- Port (9 o'clock position);
- Stbd (3 o'clock position);

**12.3.3 Propeller Shaft Removals and Inspections**

12.3.3.1 The Contractor must provide the services of an FSR to provide oversight of all work being performed on the shafting systems. Final system performances must be verified by the FSR and must be signed-off attesting that the systems has been services in accordance with Rolls Royce requirements. The FSR must have a good working knowledge of the specific shafting systems installed on the CCGS Private Robertson V.C.

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<b>PROPELLER HUBS, SHAFT CLEARANCES &amp; SHAFT SEALS</b>		

- 12.3.3.2 The Contractor must remove the propeller rope guards from the aft stern tube bosses on both sides. This must include the removal of the rope cutters.
- 12.3.3.3 The Contractor must label and mark the shaft grounding system fitted to the shafts. This system must be disconnected and removed from the shaft line. This must include the removal of the bushes and brush holders as space will be required for the removal of the shaft seal.
- 12.3.3.4 The Contractor must label and mark the shaft speed measuring system fitted to the shafts. The system must be disconnected and removed from the shaft line. This must include the proximity sensors for the speed signal. The Contractor must measure the distance between the proximity sensors to the electrical pic-ups. This distance must be recorded and provided to the TA.
- 12.3.3.4.1 The Contractor must clean the shafts of all corrosion and all debris after the removal of items in Sections 12.3.3.2 and 12.3.3.3 to facilitate the removal of the SKF Coupling.
- 12.3.3.5 The Contractor must follow the disassembly procedures provided in the SKF Installation manual for the removal of the shaft coupling. Care must be taken to ensure that all necessary measurements are recorded to ensure that the coupling is re-installed in the correct position and provided with the correct pressure upon re-installation.
- 12.3.3.5.1 The coupling must be slid aft to allow for the disconnection of the inner tube of the CPP system.
- 12.3.3.6 The Contractor must follow the disassembly procedure provided in the Rolls Royce Shaft Installation manual to disconnect the inner tubes of the CPP systems. Every effort must be made to recover the oil that will drain from the systems at this point. The oil must be disposed of ashore and disposal certificates must be presented to the TA proving that the oil was disposed of in accordance with Federal, Provincial and municipal regulations. Oil spilled into the bilges must be cleaned-up at the Contractor's expense.
- 12.3.3.6.1 The Contractors must remove the shafts aft and care must be taken to avoid damaging the intermediate and aft bearing surfaces as well as the propeller blades by providing sufficient support when the propeller shafts clear the individual bearing surfaces.
- 12.3.3.7 The Contractor must remove the SKF couplings and sling them out of the way once the shafts has been withdrawn the required distance to allow for the removal of the shaft couplings.
- 12.3.3.8 The Contractor must inspect the shafts and shaft bearings as detailed in Section 12.4.1.
- 12.3.4 Propeller Hubs and Blade Removal**
- 12.3.4.1 The Contractor must remove 1 blade from each propeller hub and its associated hardware for the inspection by the attending Lloyd's surveyor. The propeller blades must be removed under the direction of the Rolls Royce FSR. The Contractor must dispose of all oil that is drained from the propeller hubs in accordance with federal and provincial regulations.

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<b>PROPELLER HUBS, SHAFT CLEARANCES &amp; SHAFT SEALS</b>		

12.3.4.2 The Contractor must reinstall the propeller blades of each propeller hub with a new O-ring and in accordance with the directions in the manual and the guidance of the FSR.

**12.3.5 Propeller Shaft Installations**

12.3.5.1 The Contractor must reinstall the shaft couplings on the shafts and then proceed to reconnect the shaft lines as per the installation manual, while exercising care to ensure that the shaft line bearings are not damaged during the insertion of the shafts back into the vessel.

12.3.5.2 The Contractor must protect the inner tube threaded ends of each shaft line from damage as they form part of the mechanical seal for the hydraulic system.

12.3.5.3 The Contractor must assemble the inner tubes and connect the shafts as per the installation instructions in the manual.

12.3.5.4 The Contractor must re-install the SKF coupling after the inner tubes of the shaft system have been reconnected and torqued. The Contractor must verify the position of the SKF coupling in relation to the measurements taken and recoded prior to the removal of the SKF coupling. Installation must be as per the supplied SKF Manual.

12.3.5.5 The Contractor must reinstall the shaft grounding systems as per the manual and must reconnect the system as per the documentation recorded prior to disassembly.

12.3.5.6 The Contractor must reinstall the speed measuring system and must ensure that all proximity sensors are adjusted to the correct distance from the shafting based on the recorded measurements prior to disassembly.

12.3.5.7 The Contractor must reinstall the aft propeller hub seals to the aft liners and once the propeller shafts are refitted into the vessel the Contractor must re-install the rope guards on each aft stern frame.

12.3.5.8 The Contractor must refill the CPP system with new Contractor supplied oil. The Contractor must follow the instructions in the installation manual ensuring that all air is bled from the system and must set to work the system, ensuring that system pressures are normal and that the propeller blades rotate in the ahead and after directions as required.

**12.4 PROOF OF PERFORMANCE**

**12.4.1 Inspections**

12.4.1.1 The Contractor must take the bearing clearance readings of Section 12.3.2 in the presence of the attending Lloyd’s surveyor and must afford the TA the opportunity to witness the taking of these readings. Readings must be taken within 48 hours of docking the vessel.

12.4.1.2 The Contractor must clean and inspect the PORT and STBD shafts for any defects. These must be noted and provided to the attending Lloyd’s surveyor and the TA and IA. Shaft diameter measurements must be taken at the front and back

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of each bearing surface and the measurement must be taken in four places at each location. Measurements must be recorded and provided to the TA and IA.

- 12.4.1.3 The Contractor must inspect the PORT and STBD stern tube bearings, the intermediate bearings and the AFT Bracket Bearings. All finding must be recorded and provided to the TA and IA.
- 12.4.1.4 The Contractor must remove the aft seals between the aft liner and the propeller hub flange. This area must be inspected by a certified NDT Level II inspector using Magnetic Particle or Ultrasound inspection technique to determine if there are any surface cracks in propeller shaft flange area.
- 12.4.1.5 The Contractor must inspect the liners of the propeller shafts for any anomalies and proper sealing at of the liners at all ends.
- 12.4.1.6 The Contractor must provide the attending Lloyd’s surveyor the opportunity to witness the internals of propeller hubs and the removed blade of each shaft line. Where required by the FSR, the Contractor must take and record readings and provide these to the TA and the IA.

**12.4.2 Test and Trials**

- 12.4.2.1 The Contractor must develop a test and trials plan that will test all aspects of the propeller shafting systems. The test and trials plan must be submitted to the IA and TA prior to the undocking of the vessel.
- 12.4.2.2 The Contractor must notify the IA upon completion of the work in this specification item and must afford the IA the opportunity to witness all completed work prior the undocking of the vessel.
- 12.4.2.3 The Contractor must complete all set to work requirements as directed by the Rolls Royce FSR in order to validate the proper calibration, function and operational readiness of the CPP systems. Tests must include operational pressure tests in the dry dock to validate there are no leaks in the propeller hubs, the proper movement of the propeller blades, and that the correct pitch angles are displayed on the instrumentation. Sea trials must be conducted to test the CPP systems through their full range of adjustments for pitch and power transmission from the gearboxes to the controllable pitch propellers and that all pressures and temperatures are normal.
- 12.4.2.4 The Contractor must complete all set to work requirements as directed by the Simplex Americas LLC FSR in order to validate the shaft seals water tightness during a dock trial where the ship’s crew will rotate the propellers at a moderate speed, determined by the TA in agreement with the Contractor, with the objective of finding any water leaks and overheating.
- 12.4.2.5 The Contractor must complete a sea trial with 100% engine load for one hour to verify that all systems operate within the equipment manufacturer’s standards.

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<b>PROPELLER HUBS, SHAFT CLEARANCES &amp; SHAFT SEALS</b>		

## 12.5 DELIVERABLES

### 12.5.1 Documentation (Reports/Drawings/Manual)

- 12.5.1.1 The Contractor must prepare and submit a report to the TA of all work done, all measurements taken and all "AS LEFT" measurements for the SKF Couplings, the shaft seals and shaft bearing clearances before the end of the contract in accordance with Section 2.12.

Spec Item:	Specification	TCMS Field #:
<b>BOW THRUSTER GEAR OIL AND SEAL CHANGE</b>		

### 13.0 BOW THRUSTER GEAR OIL AND SEAL CHANGE

#### 13.1 IDENTIFICATION

13.1.1 The Contractor must change the bow thruster gear oil and the propeller shaft seals.

#### 13.2 REFERENCES

##### 13.2.1 Manuals

No.	Description	Electronic File
1	Hydraulic Thruster (PKK 24 TRAC (24)	
2	24 TRAC ASSY drawing #29351	
3	TRAC Shaft Seal Change Procedure	

##### 13.2.2 Drawings

Drawing Number	Drawing Title	Electronic File Name
INM2428TRACHYD	Thruster Installation	
REF 32277	TRAC 24/28 Seal Change	

##### 13.2.3 Regulation

- 13.2.3.1 Canada Shipping Act, 2001: Marine Machinery Regulations (SOR/90-264)
- 13.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

#### 13.3 TECHNICAL

- 13.3.1 The Contractor must ensure that all applicable safety precautions including equipment lock outs and tag outs are implemented prior to the start of work.
- 13.3.2 The Contractor must ensure that, prior to the start of disassembly, precautions are taken to ensure the reassembly and reinstallation of all system and equipment as per original and in accordance with manufacturer's specification.
- 13.3.3 The Contractor must report, by email, all deficiencies as they are identified to the TA and IA and make recommendations for their remedial action.
- 13.3.4 The Contractor must remove the bow thruster grates to access the thruster unit.
- 13.3.5 The Contractor must notify the IA when the oil will be drained from the bow thruster unit such that the IA can take an oil sample for analysis mid-stream through the draining process. The oil must be drained into a clean container to allow for the examination of the oil condition by the TA and IA.
- 13.3.6 The Contractor must follow the TRAC shaft seal change procedure manual to change the oil and seals. The oil and seals will be provided by Canada.
- 13.3.7 Following the completion of all disassembly, and prior to reassembly, the Contractor must afford the TA and TI the opportunity to inspect all disassembled components.

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	Specification	
<b>BOW THRUSTER GEAR OIL AND SEAL CHANGE</b>		

### 13.4 PROOF OF PERFORMANCE

#### 13.4.1 Testing/Trials

- 13.4.1.1 The Contractor must develop a test and trials plan to test the bow thruster. As a minimum, the hydraulic system must be tested in the dock prior to the undocking of the vessel to allow for inspection of the oil seal under operating pressure.
- 13.4.1.2 The Contractor must conduct a dock trial where the bow thruster is checked for proper operation by verifying pitch angles from full PORT to full STBD.
- 13.4.1.3 The Contractor must conduct a sea trial where the thruster will be used with maximum thrust for a period of five minutes in each direction. The operational level of the oil header tank is to be recorded before trials and monitored during all trials.

#### 13.4.2 Certification

- 13.4.2.1 Prior to the close of contract, certification or other documentation must be submitted to the TA and TI attesting to the quality of new materials and components.

### 13.5 DELIVERABLES

#### 13.5.1 Documentation (Reports/Drawings/Manuals)

- 13.5.1.1 A comprehensive report of all inspections including all findings, recommendations, test results and recorded measurements must be prepared and submitted to the TA and TI prior to the close of contract.

Spec Item:	Specification	TCMS Field #:
<b>SEWAGE SLUDGE TANK AND BLACK WATER TANK</b>		

## 14.0 SEWAGE SLUDGE TANK AND BLACK WATER TANK

### 14.1 IDENTIFICATION

- 14.1.1 The Contractor must open, clean and present the Sewage Sludge tank, the Black Water tanks and the Dirty Oil & Sludge tanks for inspection by the attending Lloyd's surveyor.
- 14.1.2 The Contractor must bid on renewing part of the tank coating system in each tank.

### 14.2 REFERENCES

#### 14.2.1 Drawings

Drawing number	Description	Electronic File
AF6101-89940-02	Tank Arrangement, Capacity Plan	
6094-61100-01	Bottom plug Diagram	

#### 14.2.2 Manual and Photos

NO.	Description	Electronic File
1	MSPV International Coatings Maintenance Plan OBM	
2	Pdf A Leblanc Access to Dirty Oil tank	

### 14.3 TECHNICAL

#### 14.3.1 Tank Cleaning

- 14.3.1.1 The Contractor must stop and lock-out the ship's sanitary water system.
- 14.3.1.2 The Contractor must remove the Dirty Oil & Sludge Tank (Tank #15) docking plug, drain the tank and dispose of the oil and sludge remaining in the tank.
- 14.3.1.3 The Contractor must contain the dirty oil and sludge and must dispose of these contents in accordance with Federal and provincial regulations in effect. The Contractor must provide disposal certificates.
- 14.3.1.4 For bidding purposes, the Contractor must bid on the removal of 200 liters of liquid waste and 20 liters of solid waste for an estimated total of 220 liters from the tank. The PWGSC 1379 process must be used to prorate this quantity if required.
- 14.3.1.5 The Contractor must open the manhole to the Dirty Oil & Sludge tank, pump dry, clean, ventilate the tank and certify it safe for entry to access the Sewage Sludge tank and the Black Water tanks for the duration of the work inside these tanks.
- 14.3.1.6 The Contractor must remove the level gauge under the manhole and replace it with a new one, supplied by Canada.
- 14.3.1.7 The Contractor must remove the Sewage Sludge Tank docking plug, drain the tank and dispose of the liquid and sludge remaining in the tank (Tank #6) in accordance with federal and provincial regulations in effect.

Spec Item:	Specification	TCMS Field #:
<b>SEWAGE SLUDGE TANK AND BLACK WATER TANK</b>		

- 14.3.1.8 For bidding, the Contractor must bid on the removal and disposal of 100 liters of liquid waste and 20 liters of solid waste for an estimated total of 120 liters from the tank. The PWGSC 1379 process must be used to prorate this quantity if required.
- 14.3.1.9 The Contractor must open the manhole cover to the Sewage Sludge Tank, pump dry, clean, ventilate the tank and certify it safe for entry and safe passage to the Black Water Tank for the duration of the work inside.
- 14.3.1.10 The Contractor must remove the Black Water Tank docking plug, drain the tank and dispose of the liquids and solids remaining in the tank (Tank #7b) in accordance with federal and provincial regulations in effect.
- 14.3.1.11 For bidding, the Contractor must bid on the removal and disposal of 100 liters of liquid waste and 15 liters of solid waste for an estimated total of 115 liters from the tank. The PWGSC 1379 process must be used to prorate this quantity if required.
- 14.3.1.12 The Contractor must open the manhole cover of the Black Water Tank giving access to the tank (Tank #7b), pump dry, clean, ventilate the tank and certify it safe for entry for the duration of the work inside.
- 14.3.1.13 The Contractor must clean the three tanks mentioned above with a pressure wash system of at least 5000 psi.
- 14.3.1.14 The three tanks must be inspected by the Lloyd's surveyor and the TA for structural damage and the quality of each tank's coating system.
- 14.3.1.15 The Contractor must remove the suction pipe from each of the three tanks. Each pipe is connected to a flange. The pipes must be cleaned, inside and out, with a water pressure system with at least 5000 psi. The Contractor must inspect these pipes for corrosion and advise the TA of any defects. The PWGSC 1379 process must be used to deal with any structural repairs inside the tanks if required.
- 14.3.1.16 The Contractor must reinstall the three suction pipes with new Garlock style gaskets.
- 14.3.1.17 Once all work inside the tanks is complete the Contractor must install the three docking plugs and must reinstall the manhole covers using new Contractor supplied manhole gaskets, nuts and washers. All replacement materials must be of the same grade as those removed.
- 14.3.2 Coating System Touch-Up Dirty Oil Tank**
- 14.3.2.1 If required and after any required structural work, the Contractor must prepare the surfaces to be coated to an SP-11 standard with feathered edges to the existing coating system. The Contractor must quote for the preparation and coating of 5 square meters of surface area in the Dirty Oil Tank with 1 coat of Interline 624 Buff with a Dry Film Thickness of 6 mil and on 1 coat of Interline 624 White with a Dry Film Thickness of 10 mil. The Contractor must apply International Interline 925 to a Dry Film Thickness of 12 mil. The PWGSC 1379 Process must be used to prorate the actual area recoated.
- 14.3.3 Coating System Touch-Up Sewage and Black Water Tanks**
- 14.3.3.1 If required and after any required structural work, the Contractor must prepare the surfaces to be coated to an SP-11 standard with feathered edges to the existing

Spec Item:	Specification	TCMS Field #:
<b>SEWAGE SLUDGE TANK AND BLACK WATER TANK</b>		

coating system. The Contractor must quote for the preparation and coating of 5 square meters of surface area in the Sewage Sludge Tank and the Black Water Tank. The Contractor must apply International Interline 925 to a Dry Film Thickness of 12 mil. The PWGSC 1379 Process must be used to prorate the actual area recoated.

#### **14.4 PROOF OF PERFORMANCE**

##### **14.4.1 Inspections**

14.4.1.1 The Contractor must advise the Lloyd’s Surveyor and the TA when the tanks and their coating systems s are ready for inspection and survey credit must be obtained for the tanks.

##### **14.4.2 Testing and Trials**

14.4.2.1 The Contractor must hydrostatically pressure test the tanks to a head of 2.44 meters above the crown of the tank for a duration of 1 hour. This pressure test must be witnessed by the TA and IA.

14.4.2.2 The Contractor must be responsible for the water for the hydrostatic test and its disposal following the test.

14.4.2.3 The Contractor must provide a final vacuum test on each of the docking plugs if they are removed for the draining of the respective tanks. This vacuum test must be witnessed by the IA.

#### **14.5 DELIVERABLES**

##### **14.5.1 Documentation**

14.5.1.1 The Contractor must provide the TA with a copy of all gas free and entry certificates for the tanks.

14.5.1.2 The Contractor must provide the TA with a copy of all disposal certificates for the liquids and sludge quantities removed from the 3 tanks.

14.5.1.3 The Contractor must provide the TA with a written report of the condition of the tanks, their coating systems and where the coating systems have been touched up, the details of the substrate temperature the wet and dry bulb temperatures before, during and after coating system application and the relative humidity. This report must be in accordance with Section 2.12.

## 15.0 POTABLE WATER TANKS

### 15.1 IDENTIFICATION

- 15.1.1 The Contractor must open, clean and prepare the potable water tanks for a Lloyd's inspection and obtain a survey credit.
- 15.1.2 The Contractor must provide the services of a coating system FSR if there is a need to renew a portion of the tank coatings.

### 15.2 REFERENCES

#### 15.2.1 Equipment Data

Tank	Location	Volume	Area
PORT Pot. Water Tank	Frames 27 – 31	3.2 cubic meters	180m <sup>2</sup>
STBD Pot. Water Tank	Frames 27 – 31	3.2 cubic meters	180m <sup>2</sup>

- 15.2.1.1 The existing tank coating system is International Paint Interline 975P and this product must be used for repairs.

#### 15.2.1.2 Manuals and documentation

Name	Description	Electronic File
	MSPV International Coatings Maintenance Plan OBM	
CCG Technical Bulletin 2015-01	Potable water tank epoxy based surface coatings update, etc	
7.A.12	Fleet Safety manual Section 7.A.12- Potable Water Quality	
<a href="http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res_recom/index-eng.php">http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res_recom/index-eng.php</a>	Health Canada Guidelines for Canadian Drinking water Quality	
International Paint	On-board Maintenance Plan for Hero Class Vessels	
Interline 975P	Application Guidelines Potable Water Tanks Interline 975P	

## 15.2.2 Drawings

Drawing No	Description	Electronic File
AF6101-89940-02	Tank Arrangement and Capacity plan	
AF6101-53000-02	Sanitary Fresh Water System	
AF6101-63100-01	Paint Schedule	
6094-61100-01	Bottom Plug Diagram	

## 15.2.3 Regulations

15.2.3.1 N/A

## 15.2.4 Standards

15.2.4.1 7.A.12 Potable Water Quality – Fleet Safety Manual

15.2.4.2 NSF 61 Coating Quality Standard

## 15.3 TECHNICAL

### 15.3.1 Tank Cleaning

- 15.3.1.1 The Contractor must isolate the potable water tanks from the potable water system via his lock-out tag-out system.
- 15.3.1.2 The Contractor must remove the manhole cover to each tank, empty the tanks using portable pumps and must ventilate the tanks such that they can be certified safe for entry. The Contractor must provide the necessary safe for entry permit for the duration of the work in the tanks.
- 15.3.1.3 The Contractor must clean all tank surfaces to SP-1, removal all of all debris and sludge and the tanks must be wiped dry. All debris must be removed ashore and disposed of by the Contractor. When entering the tanks, the Contractor must take care to protect the tank coating system and must ensure that no oil or other foreign substances are introduced into the tanks.
- 15.3.1.4 For bidding, the Contractor must quote on removing 0.5 cubic meters of standing water from each tank. The PWGSC 1379 process must be used to prorate this quantity.
- 15.3.1.5 Should structural repairs be required, these must be dealt with using the PWGSC 1379 process.
- 15.3.1.6 Tanks must be inspected as per Section 15.4.1.

### 15.3.2 Tank Coating System Touch-Up

- 15.3.2.1 The Contractor must inspect the tanks with the TA and the coating manufacturer's FSR to determine the areas of the coating system that require maintenance and what this total surface area is.

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- 15.3.2.2 For bidding, the Contractor must quote on touch up and repair of 10 square meters of surface area between the two tanks and this area must include the feathered areas into the existing coating system. The PWGSC 1379 process must be used to prorate this area if needed.
- 15.3.2.3 The Contractor must prepare the identified areas by power tooling to SP-11, and the edges to be feathered as per the onboard maintenance plan for Hero Class Vessels Specification. Note: "Area" includes the feathering zone.
- 15.3.2.4 The Contractor must use the International Interline 975P product to Dry Film Thickness of 12 and follow the application procedures stated on the product information sheet for its application in consultation with the coating system FSR. The use of thinners is not permitted; all curing between coats and ventilation requirements must be adhered to. New hoses must be used for the application of paint in the Potable Fresh Water Tanks. Hoses must not be flushed with thinner and then reused for the potable water tank coating application. The work schedule for tank coating system application must provide drying times and substrate temperatures consistent with the coating system manufacturer's recommendations for the product application. All environmental parameters must be recorded and provided in the final report from the Contractor, including, air temperature, dew point, substrate temperature, all before, during and after application of the coating system.
- 15.3.2.5 The potable water tanks must not be sealed and filled with any liquid until the coating system has fully cured. Failure of the Contractor to ensure that tank coatings are fully cured and are no longer off gassing remains the Contractor's responsibility
- 15.3.2.6 The Contractor must close all tank access covers after final inspection by the TA. The Contractor must replace all tank access cover gaskets with new 1/8 inch thick fiber reinforced neoprene gaskets suitable for potable water service

## 15.4 PROOF OF PERFORMANCE

### 15.4.1 Inspection

- 15.4.1.1 Once all work has been completed and the tanks are cleaned of all debris and work by-products, the Contractor must arrange for inspection and survey of the potable water tank by the Lloyd's surveyor and the TA.

### 15.4.2 Testing/Trials

- 15.4.2.1 Once the tanks have been closed, the Contractor must perform a hydrostatic test on the potable water tanks using hyper-chlorinated water to a head of 2.44 meters. The Contractor must connect a manometer to the tank to measure the 2.44 meter head which must be maintained for 1 hour with no appreciable drop in manometer level. The Contractor must either use clean fresh potable water for the test or he may use the hyper-chlorinated water to be used for the hyper-chlorination process.
- 15.4.2.2 The potable water tanks and the ship's fresh water system must be hyper-chlorinated in accordance with the procedures laid out in the Coast Guard Fleet Safety Manual procedure 7.A.12 – Potable Water Quality. On completion of hyper-chlorination the tanks must be drained and flushed twice before being subjected to the potable water testing. The Contractor must be responsible for the disposal of all water used to treat the fresh water tanks including de-chlorination of the super-chlorinated water.
- 15.4.2.3 The Contractor must arrange for testing of the potable water from each tank and the potable water system in accordance with the Annual Testing of Potable Water as specified in the Canada Drinking Water Guidelines as prescribed by Health Canada. To verify this, the following procedure must be followed for each tank:

- 15.4.2.4 The Contractor must fill the fresh water tanks with fresh water, hyper-chlorinated, de-chlorinated and then drained in accordance with the CCG Fleet Safety Manual (FSM) Potable Water Quality Guidelines contained in section 7.A.12 prior to filling for testing. If the Contractor uses calcium hypochlorite to produce the hyper-chlorinated potable water, the water must be filtered to remove all calcium before it is introduced into the potable water tanks.
- 15.4.2.5 The Contractor must also hyper-chlorinate the potable water distribution system as per FSM. The main charcoal media filter must be bypassed and locked out while system super chlorination takes place. Refer to AF6101-53000-02, Sanitary Fresh Water system.
- 15.4.2.6 The Contractor must fill the tanks with potable water to approximately fifty percent of the working volume of each tank.
- 15.4.2.7 The tanks must be allowed to remain stagnant for 48 hours before water samples are taken for testing.
- 15.4.2.8 The Contractor must collect 1 water sample from the freshwater supply line used to fill the tanks.
- 15.4.2.9 The Contractor must collect 2 water samples from the water inside each tank.
- 15.4.2.10 The Contractor must take samples from the distribution system in accordance with FSM procedure.
- 15.4.2.11 The Contractor must prepare, correctly package and send the above listed water samples to an accredited laboratory for analysis. The water samples must be tested for the 28 parameters described in the Fleet Safety Manual paragraph 3.6F of 7.A.12 .Results must be provided immediately to the TA. All parameters must be within the Health Canada Guidelines for Canadian Drinking Water Quality.
- 15.4.2.12 The Contractor must return the water level in the tanks to that of when the vessel was docked.
- 15.4.3 Certification**
- 15.4.3.1 The Contractor must obtain water test reports from the laboratory indicating that the water quality meets the specifications.

## **15.5 DELIVERABLES**

### **15.5.1 Documentation**

- 15.5.1.1 The Contractor must provide waste and hyper-chlorinated water disposal certificates to the TA prior to the completion of the contract.
- 15.5.1.2 The Contractor must provide copies of all tank entry certificates to the TA prior to the completion of the contract.
- 15.5.1.3 The Contractor must provide the potable water laboratory reports to the TA prior to the close of the contract.
- 15.5.1.4 The Contractor must provide a detailed report from the coating FSR including the required parameters identified in Section 15.3.

### ANNEX B - BASIS OF PAYMENT

Annex B will form the Basis of Payment for the resulting Contract and should not be filled in at the bid submission stage.

#### B1 Contract Firm Price

A)	Known Work For work as stated in PART 7 - article 7.1, specified in Annex A and detailed in the attached Annex H – Appendix 1 & 2 - Pricing Data Sheet for the FIRM PRICE of:	\$
B)	Applicable taxes of line A) only:	\$
C)	Total firm Price including Applicable Taxes [A) + B)]	\$

#### B2 Unscheduled Work

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

"Number of hours (to be negotiated) X \$ \_\_\_\_\_, being the Contractor's firm hourly charge-out labour rate which includes overhead, consumables, and profit, plus net laid-down cost of materials to which will be added a mark-up of 10%, plus applicable taxes, of the total cost of material and labour. The firm hourly charge-out labour rate and the material mark-up will remain firm for the duration of the Contract and any subsequent amendments."

B2.1: Notwithstanding definitions or usage elsewhere in this document, or in the Contractor's Cost Management System, when negotiating hours for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package.

Elements of Related Labour Costs identified in this section B2.2 below, will not be negotiated, but will be compensated for in accordance with B2.2.

B2.2: Allowance for Related Labour Costs such as: Management, all Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Certification Inspecting and Reporting, Estimating, and Preparing Unscheduled Work Submissions will be included as Overhead for the purposes of determining the Charge-out Labour Rate entered in line B2 above.

B2.3: The 10% mark-up rate for materials will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowed for in the Charge-out Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

#### Pro-rated Prices Unscheduled Work

Hours and prices for unscheduled work shall be based on comparable historical data applicable to similar work at the same facility, or shall be determined by pro-rating the quoted Work costs in the Contract when in similar areas of the vessel.

#### B3 Overtime

The Contractor must not perform any overtime under the Contract unless authorized in advance and in writing by the Contracting Authority. There will be no overtime payment for Known Work. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing the overtime performed pursuant to the written authorization. Payment for authorized overtime will be calculated as follows:

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030md  
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For unscheduled work, the Contractor will be paid the authorized overtime hours at the following charge-out labour rates:

- a. Time and One Half\*\*: \$ \_\_\_\_\_ per hour; or
- b. Double Time\*\*\*: \$ \_\_\_\_\_ per hour

This rate shall be a blended rate for all classes of labour, engineering and foreperson and shall include all overheads, supervision and profit.

These rates will remain firm for the duration of the Contract, including all amendments and are subject to audit if considered necessary by Canada.

\* Regular time is defined as an 8 hour work day.

\*\* Time and One Half is defined as time in excess of the Regular Time\*.

\*\*\* Double Time is defined as Sundays and Statutory Holidays.

#### B4 Daily Services Fee

In the event of a delay in the performance of the Work that lengthens the Work period beyond the date specified in this Contract, and if such delay is recognized and agreed upon by the Contracting Authority as being attributable to Canada, Canada agrees to pay the Contractor the daily services fee, described below, for each day of such delay. This fee shall be the sole liability of Canada to the Contractor for the delay.

The firm daily services fee is:

- a. For a Working Day: \$ \_\_\_\_\_
- b. For a Non-Working Day: \$ \_\_\_\_\_

The above fees shall include but not be limited to, all aspects of the following costs: Project Management Services, Administrative Support, Production Services, Quality Assurance, Material Support, Planned Maintenance and Ship Services, and all other resources and direct costs needed to maintain the Vessel at the Contractor's facility. These fees are firm and not subject to any additional charges for mark-up or profit.

#### B5 Vessel, Refit, Repair or Docking Cost

The following costs must be included in the price:

B5.1: Ship Services: include all costs for ship services such as water, steam, electricity, etc., required for vessel maintenance for the duration of the Contract.

B5.2: Docking and Undocking include:

- a. all costs resulting from dry docking, wharfage, security, shoring, shifting and/or moving of the vessel within the successful Bidder's facility;
- b. the cost of services to tie up the vessel alongside and to cast off.

Unless specified otherwise, the vessel will be delivered by Canada to the successful Bidder's facility alongside a mutually agreed safe transfer point, afloat and upright, and the successful Bidder will do the same when the Work is completed. The cost of services to tie up the vessel alongside and to cast off must

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be included in the evaluation price.

**B5.3:** Field Service Representatives/Supervisory Services: include all costs for field service Representatives / supervisory services including manufacturers' representatives, engineers, etc. The Contractor is responsible for the performance of all subcontractors and FSRs.

These services must not be an extra charge except where unscheduled work requiring these services is added to the Contract.

**B5.4:** Removals: include all costs for removals necessary to carry out the Work and will be the responsibility of the successful Bidder whether or not they are identified in the specifications, except those removals not apparent when viewing the vessel or examining the drawings. The successful Bidder will also be responsible for safe storage of removed items and reinstalling them on completion of the Work. The successful Bidder will be responsible for renewal of components damaged during removal.

**B5.5:** Sheltering, Staging, Cranage and Transportation: include the cost of all sheltering, staging including handrails, cranage and transportation to carry out the Work as specified.

The Contractor will be responsible for the cost of any necessary modification of these facilities to meet applicable safety regulations.

#### B6 Pricing Data Sheets

Parameters from the Pricing Data Sheets will be used at Canada's sole discretion in the determination of unscheduled work price.

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## ANNEX C to PART 5 - 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 ([http://www.esdc.gc.ca/en/jobs/workplace/human\\_rights/employment\\_equity/federal\\_contractor\\_program.page](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page)).

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 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

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)

## ANNEX D - INSURANCE REQUIREMENTS

### D1. Ship Repairers' Liability Insurance

1. The Contractor must obtain Ship Repairer's Liability Insurance and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$10,000,000 per accident or occurrence and in the annual aggregate.
2. The Ship Repairer's Liability insurance 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 Environment Canada and Public Works and Government Services Canada for any and all loss of or damage to the vessel, however caused.
  - c. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.
  - d. Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
  - e. Cross Liability/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.

### D2. Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$10,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability 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 should read as follows: Canada, as represented by Public Works and Government Services Canada.
  - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
  - c. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
  - d. Cross Liability/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. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
  - f. Employees and, if applicable, Volunteers must be included as Additional Insured.
  - g. Employers' Liability (or confirmation that all employees are covered by Worker's Compensation (WSIB) or a similar program)

- h. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority with thirty (30) days written notice of policy cancellation.
- i. If the policy is written on a claims-made basis, coverage must be in place for a period of at least twelve (12) months after the completion or termination of the Contract. Employees and, if applicable, Volunteers must be included as Additional Insured.
- j. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
- k. Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

D3. Environmental Impairment Liability Insurance

- 1. The Contractor must obtain Contractor's Pollution Liability insurance, providing coverage for Asbestos Abatement, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$5,000,000 per accident or occurrence and in the annual aggregate.
- 2. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
- 3. The Contractor's Pollution Liability 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. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
  - c. Separation of Insureds: 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.
  - d. Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
  - e. Incidental Transit Extension: The policy must extend to losses arising from any waste, products or materials transported, shipped, or delivered via any transportation mode to a location beyond the boundaries of a site at which the Contractor or any entity for which the Contractor is legally liable is performing or has performed the operations described in the contract.
  - f. Lead and Asbestos Abatement: The policy must provide coverage for the removal and disposal of asbestos material.
  - g. Litigation Rights: Pursuant to subsection 5(d) of the Department of Justice Act, S.C. 1993, 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.

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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.

## ANNEX E – WARRANTY

### Warranty Procedures

#### E1. Scope

- a. The following are the procedures that suit the particular requirements for warranty considerations for a vessel on completion of a refit.

#### E2. Reporting Failures with Warranty Potential

- a. The initial purpose of a report of a failure is to facilitate the decision as to whether or not to involve warranty and to generate action to effect repairs. Therefore in addition to identification, location data, etc. the report must contain details of the defect. Warranty decisions as a general rule are to be made locally and the administrative process is to be in accordance with procedures as indicated.
- b. These procedures are necessary as invoking a warranty does not simply mean that the warrantor will automatically proceed with repairs at his expense. A review of the defect may well result in a disclaimer of responsibility, therefore, it is imperative that during such a review the Department is directly represented by competent technical authority qualified to agree or disagree with the warrantor's assertions. Since the INSPECTION AUTHORITY has the closest and most active involvement of the contracted work completed this agency must assume this role.

#### E3. Procedures

- a. Immediately it becomes known to the Ship's Staff that an equipment/system is performing below accepted standards or has become defective, the procedures for the investigation and reporting are as follows:
  - i. The vessel advises the Technical Authority when a defect, which is considered to be directly associated the refit work, has occurred.
  - ii. On review of the Specification and the Acceptance Document, the Technical Authority in consort with Ship's Staff is to complete the Tombstone Data and section 1 of the Appendix 1 – Warranty Claim Form Annex D and forward the original to the Contractor for review with a copy to the PWGSC Contracting Authority. If the PWGSC Contracting or INSPECTION AUTHORITY is unable to support warranty action, the Defect Claim Form will be returned to the originator with a brief justification. (It is to be noted that in the latter instance PWGSC will inform the Contractor of its decision and no further action will be required of the Contractor.

Warranty defect claims may be forwarded in hard copy, by fax or by e-mail whichever format is the most convenient.

- iii. Assuming the Contractor accepts full responsibility for repair, the Contractor completes Section 2 and 3 of the Warranty Claim Form, returns it to the INSPECTION AUTHORITY who confirms corrective action has been completed, and who then distributes the form to the Technical Authority and the PWGSC Contracting Authority.
  - b. In the event that the Contractor disputes the claim as a warranty defect, or agrees to share, the Contractor is to complete Part 2 and 3 of the Warranty Claim Form with the appropriate information and forward it to the Contracting Authority who will distribute copies as necessary.
  - c. When a warranty defect claim is disputed by the Contractor, the Technical Authority may arrange to correct the defect by in-house resources or by contracting the work out. All associated costs must be tracked and recorded as a possible charge against the contractor by PWGSC action. Material costs and manhours expended in correcting the defect are to be recorded and entered in Section 5 of the warranty defect claim by the Technical Authority who

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will forward the warranty defect claim to the PWGSC Contracting Authority for action. Defective parts of equipment are to be retained pending settlement of claim.

d. Defective equipment associated with potential warranty should not normally be dismantled until the Contractor's representative has had the opportunity to observe the defect. The necessary work is to be undertaken through normal repair methods and costs must be segregated as a possible charge against a contractor by PWGSC action.

#### **E4. Liability**

a. Agreement between the Contracting Authority, INSPECTION AUTHORITY, Technical Authority and the Contractor will result in one of the following conditions:

- i. The Contractor accepts full responsibility for costs to repair or overhaul under the warranty provisions of the contract;
- ii. The Technical Authority accepts full responsibility for repair and overhaul of item concerned; or
- iii. The Contractor and the Technical Authority agree to share responsibility for the costs to repair or overhaul the unserviceable item, in such cases the PWGSC Contracting Authority will negotiate the best possible sharing arrangement.

b. In the event of a disagreement as in paragraph 5c, PWGSC will take necessary action with the Contractor while the Technical Authority informs its Senior Management including pertinent data and recommendations.

c. The total cost of processing warranty claims must include accommodation and travel costs of the Contractor's employees as well as equipment/system down time and operational constraints. Accordingly, the cost to remediate the defect, in manhours and material, will be discussed between the Contracting/Inspection Authorities and the Technical Authority to determine the best course of action.



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**2. Contractor's Investigative Report – Le rapport investigateur de l'entrepreneur**

**3. Contractor's Corrective Action – La modalité de reprise de l'entrepreneur**

\_\_\_\_\_  
Contractor name and signature – Nom et signature de l'entrepreneur

\_\_\_\_\_  
Date of corrective action – Date de  
mesures correctives

\_\_\_\_\_  
Client name and signature – Nom et signature de client

\_\_\_\_\_  
Date - Date

**4. PWGSC Review of Warranty Claim Action – Examen d'action de réclamation de garantie  
par TPSGC**

\_\_\_\_\_  
Signature – Signature

\_\_\_\_\_  
Date - Date

**5. Additional Information – Renseignements supplémentaires**

## **ANNEX F – PROCEDURE FOR UNSCHEDULED WORK**

### **F1. Purpose**

The unscheduled work Procedure has been instituted for the following purposes:

- a. To establish a uniform method of dealing with requests for unscheduled work;
- b. To obtain the necessary Technical Authority approval and Contracting Authority authorization before unscheduled work commences;
- c. To provide a means of maintaining a record of unscheduled work requirements including serial numbers, dates and accumulated cost. The Contractor shall have a cost accounting system that is capable of assigning job numbers for each unscheduled work requirement so that each requirement can be audited individually.

### **F2. Definitions**

- a. An unscheduled work Procedure is a contractual procedure whereby changes to the scope of work under the Contract may be defined, priced and contractually agreed to. Such changes may arise from:
  - i. "Work Arising" from opening up of machinery and/or surveys of equipment and material,  
OR
  - ii. "New Work" not initially specified but required on the Vessel.
- b. The procedure does not allow for the correction of deficiencies in the Contractor's Bid.
- c. No unscheduled work may be undertaken by the Contractor without written authorization by the Contracting Authority, except under emergency circumstances as described in sub paragraph 3(b) unscheduled work.
- d. Work undertaken without written Contracting Authority authorization will be considered the Contractor's responsibility and cost.
- e. The appropriate PWGSC form is the final summary of the definition of the unscheduled work requirement, and the costs negotiated and agreed to.

### **F3. Procedures**

- a. The procedure involves the electronic form PWGSC 1379 for refit and repair and will be the only form for authorizing all unscheduled work.
- b. Emergency measures required to prevent loss or damage to the Vessel which would occur if this procedure were followed, shall be taken by the Contractor on its own authority. The responsibility for the cost of such measures shall be determined in accordance with the terms and conditions of the Contract.
- c. The Technical Authority will initiate a work estimate request by defining the unscheduled work requirement. It will attach drawings, sketches, additional specifications, other clarifying details as appropriate, and allocate their serial number for the request.
- d. Notwithstanding the foregoing, the Contractor may propose to the technical Authority in writing either by letter or some type of Defect Advice Form (A Contractor owned form) that certain unscheduled work should be carried out.
- e. The Technical Authority will either reject or accept such proposal and advise the Contractor and Contracting Authority. Acceptance of the proposal is not to be construed as authorization for the work

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to proceed. If required, the Technical Authority will then define the unscheduled work requirement in accordance with sub paragraph 3(c).

- f. The Contractor will electronically submit its proposal to the Contracting Authority together with all price support and any qualifications, remarks or other information as requested.  
The price support shall demonstrate the relationship between the scope of work, the Contractor's estimated costs and its selling price. It is a breakdown of the Contractor's unit rates, estimates of person hours by trade, estimate of material cost per item for both the Contractor and all of its subcontractors including quotations, estimates and any related schedule impact and an evaluation of the Contractor's time required to perform the unscheduled work.
- g. The Contractor shall provide copies of purchase orders and paid invoices for subcontracts and/or material, including stocked items. The Contractor shall provide a minimum of two quotations for subcontracts or material. If other than the lowest or sole source is being recommended for quality and/or delivery considerations, this shall be noted. Upon request by the Contractor, the Contracting Authority shall be permitted to meet with any proposed subcontractor or material supplier for discussion of the price, and always with the Contractor's representative present.
- h. After discussion between the Contracting Authority and the Contractor and if no negotiation is required, the Contracting Authority will seek confirmation from the Technical Authority to proceed with the work by signing the form noted above in sub paragraph 3(d). The Contracting Authority will then sign and authorize the unscheduled work to proceed.
- i. In the event that the Technical Authority does not wish to proceed with the work, the Contracting Authority will cancel the proposed unscheduled work in writing.
- j. In the event the negotiation involves a credit, the appropriate PWGSC form will be noted accordingly.
- k. In the event that the Technical Authority requires unscheduled work of an urgent nature or an impasse has occurred in negotiations the commencement of unscheduled work should not be unduly delayed and should be processed as follows:
- The Contractor will complete PWGSC 1379 form indicating the estimated cost and provide it to the Contracting Authority.
  - If the Technical Authority wishes to proceed, both the Technical Authority and the Contracting Authority will sign the completed PWGSC form. It will be understood and accepted that this cost will be a ceiling price cost and therefore only subject to downward adjustment.
  - A serial number will be allocated and will include Suffix A.

The work will proceed with the understanding that following an audit of the Contractor's actual costs for completing the described work, the cost will be finalized at the ceiling price or lower, if justified by the audit. A new PWGSC form will then be completed with the finalized costs, signed and issued with the same Serial Number without the suffix "A", and bearing a notation that this form is replacing and canceling the form having the same Serial Number with the suffix "A".

NOTE: PWGSC forms bearing serial numbers with a suffix A shall not be included in any contract amendments and therefore no payment shall be made until final resolution of the prices and subsequent incorporation into the contract have been completed.

#### F4. Amendment to Contract or Formal Agreement

The contract will be amended from time to time in accordance with the contract terms in order to incorporate costs that have been authorized on the proper PWGSC form(s).

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## ANNEX G – QUALITY CONTROL / INSPECTION

### G1 Quality Control Plan

The Contractor must implement and follow the Quality Control Plan (QCP), prepared in accordance with the latest issue (at contract date) of the ISO 10005 : 2005 Quality Management – Guidelines for quality plans, approved by both the Inspection and the Technical Authority. The QCP must describe how the Contractor will conform to the specified quality requirements of the Contract and specify how the required quality activities are to be carried out, including quality assurance of subcontractors. The Contractor must include a traceability matrix from the elements of the specified quality requirements to the corresponding paragraphs in the QCP. The QCP must be made available to both the Inspection and Technical Authority for review and approval within five (5) calendar days after contract award.

The documents referenced in the QCP must be made available within two (2) working days as and when requested by the Inspection Authority. The Contractor must make appropriate amendments to the QCP throughout the term of the Contract to reflect current and planned quality activities. Amendments to the QCP must be acceptable to the Inspection Authority and the Technical Authority.

### G2 Inspection and Test Plan (ITP)

1. The Contractor must prepare an Inspection and Test Plan (ITP) comprising individual inspection and test plans for each specification item of this project in accordance with the Quality Standard and its Quality Control Plan (QCP). The ITP must be submitted to the Inspection Authority for review and amended by the Contractor to the satisfaction of the Inspection Authority.
  - a. Each ITP must contain all inspection points identified in the Specification highlighting any mandatory points that must be witnessed by the Inspection Authority and other “hold” points imposed by the Contractor to ensure the quality of the work.
  - b. Milestone delivery date for the ITP is given in the Contract however individual ITPs should be forwarded for review as developed.
2. Coding:
  - a. Each ITP is to be coded for identification clearly demonstrating a systematic approach similar to the following (Contractor’s system should be defined in its QCP):
    - i. Prefixes for Inspections, Tests and Trials:
      - prefix “1” is a contractor inspection – i.e.: 1H-10-01, 1H-10-02
      - prefix “2” is a contractor post repair test – i.e.: 2H-10-01; and
      - prefix “3” is a contractor post repair test – i.e.: 3H-10-01
  - b. Specification items followed by assigned sequence numbers for inspection processes within each Specification item; and
  - c. Cross reference to a verification document number.

### G3 Inspection and Test Plan Criteria

Inspection criteria, procedures and requirements are stated in the specifications, drawings, technical orders and reference standards invoked by the Specification. Test and trial documentation may also be included or referenced in the Specification. An individual ITP is required for each specification item.

1. All ITPs must be prepared by the Contractor in accordance with the above criteria, its quality plan and must provide the following reference information:
  - a. the ship’s name;
  - b. the specification number item;

- c. equipment/system description and a statement defining the parameter which is being inspected;
- d. a list of applicable documents referenced or specified in the inspection procedure;
- e. the inspection, test or trial requirements specified in the specification;
- f. the tools and equipment required to accomplish the inspection;
- g. the environmental conditions under which the inspections are to be conducted and the tolerances on the inspection conditions;
- h. a detailed step by step procedure of how each inspection is to be performed, conformance parameters, accept/reject criteria and recording of results, deficiencies found and description of corrective action(s) required;
- i. name and signature of the person who prepared the plan, date prepared and amendment level; and
- j. names and signatures of the persons conducting and witnessing the inspection, test or trial.

2. Contractor Imposed Testing:

- a. Tests and trials in addition to those given in the specification must be approved by the Inspection Authority.
- b. Amendments: Amendment action for the ITPs must be ongoing throughout the refit and reflect the inspection requirements for unscheduled work. Amendments must be submitted as developed, but not less frequently than once every second week.

G4 Conduct of Inspection

1. Inspections must be conducted in accordance with the ITP and as detailed in G4.
2. The Contractor must provide its own staff or subcontracted staff to conduct inspections, test and trials; excepting that Technical Authority or Inspection Authority personnel may be designated in the specification in which case the Contractor must ensure that its own staff are provided in support of such inspection, test and/or trial.
3. The Contractor must ensure that the required conditions stated in the ITP prevail at the commencement of and for the duration of each inspection, test and/or trial.
4. The Contractor must ensure that personnel required for equipment operation and records taking during the inspection, test and/or trial are briefed and available at the start and throughout the duration of the inspection, test and/or trial. Tradesmen or FSRs who may be required to effect minor changes or adjustments in the installation must be available at short notice.
5. The Contractor is to coordinate the activities of all personnel taking part in each inspection, test and/or trial and ensure that safe conditions prevail throughout the inspection, test and/or trial.

G5 Inspection Records and Reports

1. The Contractor on the inspection record, test or trials sheets as applicable must record the results of each inspection. The Contractor must maintain files of completed inspection records consistent with the Quality Standard and its Quality Plan for this project.
2. The Contractor's QC representative (and the FSR when required) must sign as having witnessed the inspection, test or trial on the inspection record. The Contractor must forward originals of completed inspection records, together with completed test(s) and/or trials sheets to the Inspection Authority as they are completed.
3. Unsatisfactory inspection, test and/or trial results for which corrective action cannot be completed during the normal course of the inspection, test and/or trial will require the Contractor to establish and record the cause of the unsatisfactory condition to the satisfaction of the Inspection Authority. Representatives to Canada may assist in identification where appropriate.

4. Corrective action to remove the cause of unsatisfactory inspections must be submitted to the Inspection Authority in writing by the Contractor for approval before affecting such repairs and rescheduling of the unsatisfactory inspection, test and/or trial. Such notices must be included in the final records passed to the Inspection Authority.
5. The Contractor must undertake rectification of defects and deficiencies in the Contractor's installation or repair as soon as practicable. The Contractor is responsible to schedule such repairs at its own risk.
6. The Contractor must reschedule unsatisfactory inspections after any required repairs have been completed.
7. Quality Control, Inspection and Test records that substantiate conformance to the specified requirements including records of corrective actions must be retained by the Contractor for three (3) years from the date of completion or termination of the Contract and must be made available to the Inspection Authority upon request.

#### G6 Inspection and Trials Process

1. Drawing and purchase orders:
  - a. Upon receipt of two (2) copies of each drawing or purchase order, the designated Inspection Authority will review its content against the provisions of the specification. Where discrepancies are noted the Inspection Authority will formally advise all concerned in writing, using the Discrepancy Notice. The resolution of any such discrepancy is a matter for consultation between the Contractor and other Crown Authorities.

NOTE: The Inspection Authority is NOT responsible for the resolution of discrepancies.

2. Inspection:
  - a. Upon receipt and acceptance of the Contractor's ITP, inspection will consist of a number of inspection points supplemented by such other inspections, tests, demonstrations and/or trials as may be deemed necessary by the Inspection Authority to permit them to certify that the work has been performed in compliance with the provisions of the specification. The Contractor must be responsible for notifying the designated Inspection Authority of when the work will be available for inspection sufficiently in advance to permit the designated Inspection Authority to arrange for the appropriate inspection.
  - b. The Inspection Authority will inspect the materials, equipment and work throughout the project against the provisions of the specification and where non-conformances are noted, will issue appropriate inspection non-conformance reports (NCR).
  - c. The Contract requires the implementation of a Quality Assurance/Quality Control (QA/QC) system so the Inspection Authority requires the Contractor to provide a copy of its internal inspection report pertaining to a work item, before conducting the requested inspection. If third party inspections are required by the Contract the reports of these inspections must be submitted before the Work is inspected by the PWGSC Inspection Authority.
  - d. Incorrect or false QA/QC documentation submitted to the Inspection Authority prior to inspection of the Work the Inspection Authority may issue an Inspection non-conformance report against the Work. In addition, a separate report may be issued against the Contractor's QA/QC system.
  - e. Before carrying out any inspection, the PWGSC Inspection Authority must review the requirements for the Work and the acceptance and/or rejections standards to be applied. Where more than one standard or requirement are applicable, the order of precedence in the Contract will identify the priority.

3. Inspection Non-Conformance Report:

- a. An Inspection Non-Conformance Report will be issued for each non-conformance noted by the Inspection Authority. Each report will be uniquely numbered for reference purposes, will be signed and dated by the Inspection Authority and will describe the non-conformance.
- b. When the non-conformance has been corrected by the Contractor and has been re-inspected and accepted by the Inspection Authority, the Inspection Authority will update the report with applicable signature and date.
- c. At completion of the project the content of all Inspection Non-Conformance Reports which have not been signed off by the Inspection Authority will be transferred to the Acceptance documents before the Inspection Authority's certification of such documents.

4. Tests, trials and demonstrations

- a. To enable the Inspection Authority to certify that the Work has been performed satisfactorily and in accordance with the Contract and specification, the Contractor must schedule, co-ordinate, perform and record all specified tests, trials and demonstrations required.
- b. Where the specification contains a specific performance requirements for any component, equipment, sub-system or system the Contractor must test each component, equipment, sub-system or system to the satisfaction of the Inspection Authority to prove that the specified performance has been achieved and that the component, equipment, sub-system or system perform as per specification.
- c. Tests, trials and demonstrations must be conducted in accordance with a logical, systematic schedule which must ensure that all associated components and equipment are proven before sub-system demonstrations or testing, and that the sub-systems are proven before system demonstration or testing.
- d. Where the specification does not contain specific performance requirements of any component, equipment, sub-system or system, the Contractor must demonstrate such component, equipment, sub-system or system to the satisfaction of the Inspection Authority.
- e. The Contractor must submit its ITP as detailed in G2.
- f. The Contractor must co-ordinate each test, trial and demonstration with all interested parties including the Inspection Authority, Contracting and Technical Authorities, regulatory authorities, Classification Society, subcontractors etc. The Contractor must provide the Inspection Authority and other Crown Authorities with a minimum of five (5) working days notice of each scheduled test, trial or demonstration.
- g. The Contractor must keep written records of all tests, trials and demonstrations conducted as detailed in G5. The Contractor may utilize the PWGSC Standards Tests & Trials Record Sheets which can be customized by the Contractor to suit individual test or trial requirements. These record sheets are available from the Inspection Authority in digital format.
- h. The Contractor must in all respects be responsible for the conduct of all tests and trials in accordance with the requirements of the Contract.
- i. The Inspection Authority and the Technical Authority reserve the right to defer commencement of or continuation with any sea trials for any reasonable cause, including but not limited to:
  - i. adverse weather;
  - ii. visibility;

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- iii. equipment failure or degradation;
- iv. lack of qualified personnel; and
- v. inadequate or non-compliance with safety standards.

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## ANNEX H – FINANCIAL BID PRESENTATION SHEET

H1 Price for Evaluation:

PRICING DATA SHEET		
A) KNOWN WORK		
ITEM	DESCRIPTION	FIRM PRICE
<b>5.0</b>	<b>SERVICES</b>	
	5.2 Berthing and Mooring	\$ _____.
	5.4 Gangways	\$ _____.
	5.5 Electrical Power	<del>_____.</del>
	Connection & Disconnection & kw-hr Meter	\$ _____.
	10, 000 kW-Hr	\$ _____.
	5.6 Fire Main Charging Service	<del>_____.</del>
	Connection & Disconnection	\$ _____.
	1 cubic meter - non-potable water	\$ _____.
	5.7 Crangage and Manlift Services	<del>_____.</del>
	Crangage \$ _____./HR x 10 HRS =	\$ _____.
	Manlift \$ _____./HR x 10 HRS =	\$ _____.
	5.8 Garbage Removal	<del>_____.</del>
	16 Cubic Meter Garbage Bin (emptied daily)	\$ _____.
	Green Bin (emptied daily)	\$ _____.
	5.9 Portable Toilet (weekly cleaning)	\$ _____.
	5.10 Vessel Security	\$ _____.
	5.11 Parking Spaces - 3	\$ _____.
	5.12 Telephone Lines and High Speed Internet	<del>_____.</del>
	2 Phone Lines	\$ _____.
1 Highs Speed Internet Connection	\$ _____.	
<b>FIRM PRICE FOR ITEM 5</b>		<b>\$ _____.</b>
<b>6.0</b>	<b>Dry-Docking</b>	
	6.3 Technical	\$ _____.
	6.4 Proof of Performance	\$ _____.

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	6.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 6</b>		\$ _____.
<b>7.0</b>	<b>Underwater Hull Inspection and Hull Painting</b>		
	7.3 Technical	\$ _____.	
	7.3.1 Underwater Hull Cleaning and Inspection	\$ _____.	
	7.3.1.1 Underwater Hull Cleaning - Hydro-blast	\$ _____.	
	7.3.1.5 Sea Bay - disposal of 1 cubic meter of debris	\$ _____.	
	7.3.1.6 Ultrasound Readings - 200 shots	\$ _____.	
	7.3.2 Underwater Hull Repairs	\$ _____.	
	7.3.2.1. Coating FSR	\$ _____.	
	7.3.2.2 50 Meters of Plate Seam and Butt Weld Renewal	\$ _____.	
	7.3.2.4 Sea Chest Grate Modification	\$ _____.	
	7.3.3 Underwater Hull Coating System Inspection	\$ _____.	
	7.3.3.3 200 square meters Underwater Hull Coating System Renewal	\$ _____.	
	7.3.2.4.1 OPTIONAL ITEM A - Hull Enclosing Structure - full hull	\$ _____.	
	7.3.2.4.1 OPTIONAL ITEM B - Hull Enclosing Structure - 10 meter Length	\$ _____.	
	7.3.4 Draft Markings (Option)	<del>_____.</del>	
	10 FWD Draft Marks	\$ _____.	
	10 AFT Draft Marks	\$ _____.	
	2 Plimsol Marks	\$ _____.	
	7.4 Proof of Performance	\$ _____.	
	7.4.2 Testing/Trials	\$ _____.	
	10 Non-destructive tests (Ultrasound)	\$ _____.	
	1 X-Ray Weld Inspection	\$ _____.	
	7.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 7</b>		\$ _____.
<b>8.0</b>	<b>Anodes</b>		
	8.3 Technical	\$ _____.	
	8.3.2 20 Hull Anodes	\$ _____.	
	8.3.3 3 Sea Chest Anodes	\$ _____.	
	8.3.4 2 Bow Thruster Anodes	\$ _____.	
	8.4 Proof of Performance	\$ _____.	

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	8.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 8</b>		\$ _____.
<b>9.0</b>	<b>Through Hull Fitting Survey and Isolation Kit Installation</b>		
	9.3 Technical	\$ _____.	
	9.3.3 Through Hull Fitting Survey Section 9.2.1.1 to 9.2.1.4 Valves	\$ _____.	
	9.3.8 Isolation Kit Installation Section 9.2.1.5 Valves	\$ _____.	
	9.4 Proof of Performance	\$ _____.	
	9.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 9</b>		\$ _____.
<b>10.0</b>	<b>Rudder, Rudder Bearings and Skeg Inspections</b>		
	10.3 Technical	\$ _____.	
	10.3.2 Rudder, Rudder Stock and Rudder Bearing Carrier Inspections	\$ _____.	
	10.3.3 Rudder Skeg Inspections	\$ _____.	
	10.4 Proof of Performance	\$ _____.	
	10.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 10</b>		\$ _____.
<b>11.0</b>	<b>Anchor, Chain and Chain Locker Inspections</b>		
	11.3.1 Anchor and Anchor Chain Inspection	\$ _____.	
	11.3.2 Chain Locker Inspection	\$ _____.	
	100 liters of liquid disposal	\$ _____.	
	10 liters of sludge disposal	\$ _____.	
	11.3.2.5 5 square meter coating renewal	\$ _____.	
	11.4 Proof of Performance	\$ _____.	
	11.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 11</b>		\$ _____.
<b>12.0</b>	<b>Propeller Hubs, Shat Clearances &amp; Shaft Seals</b>		
	12.3 Technical	\$ _____.	
	12.3.1 Propeller Shaft Seals	\$ _____.	
	12.3.1.1 Propeller Shaft Seal - FSR	\$ _____.	
	12.3.2 Propeller Shaft Clearances	\$ _____.	
	12.3.3 Propeller Shaft Removal	\$ _____.	

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	12.3.3.1 Propeller Shaft Removal – FSR	\$ _____.	
	12.3.4 Propeller Hubs and Blade Removal	\$ _____.	
	12.3.4.1 Propeller Hubs and Blade Removal - FSR	\$ _____.	
	12.3.6 Propeller Shaft Installations	\$ _____.	
	12.4 Proof of Performance	\$ _____.	
	12.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 12</b>		<b>\$ _____.</b>
<b>13.0</b>	<b>Bow Thruster Gear Oil and Seal Change</b>		
	13.3 Technical	\$ _____.	
13.4	13.4 Proof of Performance	\$ _____.	
	13.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 13</b>		<b>\$ _____.</b>
<b>14.0</b>	<b>Sewage Sludge Tank and Black Water Tank</b>		
	14.3 Technical	\$ _____.	
	14.3.1 Tank Cleaning	\$ _____.	
	14.3.1.4 200 liters of liquid waste disposal (Dirty Oil Tank)	\$ _____.	
	14.3.1.4 20 liters of solid waste disposal (Dirty Oil Tank)	\$ _____.	
	14.3.1.8 100 liters of liquid waste disposal (Sewage Sludge Tank)	\$ _____.	
	14.3.1.8 20 liters of solid waste disposal (Sewage Sludge Tank)	\$ _____.	
	14.3.1.11 100 liters of liquid waste disposal Black Water Tank)	\$ _____.	
	14.3.1.11 15 liters of solid waste disposal (Black Water Tank)	\$ _____.	
	14.3.2 Coating System Touch Up - Dirty Oil Tank - 5 square meters	\$ _____.	
	14.3.3 Coating System Touch Up - Sewage and Black Water Tanks - 5 square meters	\$ _____.	
	14.4 Proof of Performance	\$ _____.	
	14.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 14</b>		<b>\$ _____.</b>
<b>15.0</b>	<b>Potable Water Tanks</b>		
	15.3 Technical	\$ _____.	
	15.3.1 Tank Cleaning	\$ _____.	
	15.3.1.4 Tank Cleaning - .5 cubic meter water removal per tank	\$ _____.	
	15.3.2 Tank Coating System Touch-Up	\$ _____.	

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15.3.2.1	Coating System FSR	\$ _____.
15.3.2.2.	10 square meters between 2 tanks	\$ _____.
15.4	Proof of Performance	\$ _____.
15.5	Deliverables	\$ _____.
<b>FIRM PRICE FOR ITEM 15</b>		<b>\$ _____.</b>
<b>A) KNOWN WORK – TOTAL FIRM PRICE</b>		<b>\$ _____.</b>

## H2 Unscheduled Work

The Contractor will be paid for unscheduled work arising as authorized by Canada. The authorized unscheduled work will be calculated as follows:

Number of hours (to be negotiated) x \$ \_\_\_\_\_ for the Contractor's firm hourly charge-out labour rate. This rate is to include consumables, overhead and profit. The net laid-down cost of materials which may include a mark-up of ten (10) percent plus applicable taxes. The firm hourly charge-out labour rate and the material mark-up will remain firm for the duration of the Contract including any subsequent amendments.

- H2.1: Notwithstanding definitions or usage elsewhere in the Contract or in the Contractor's Cost Management System, when negotiating hours for unscheduled work PWGSC will consider only those hours of labour directly involved in the production of the subject work package.
- H2.2: Allowance for related labour costs such as management, all supervision, purchasing and material handling, quality assurance and reporting, first aid, gas free certification inspecting and reporting and estimating and preparing unscheduled work submissions will be included as overhead for the purposes of determining the charge-out labour rate as entered in section H2 above.
- H2.3: The ten (10) percent mark-up rate for material will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowable in the charge out labour rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

### Pro-rated Prices Unscheduled Work

Hours and prices for unscheduled work shall be based on comparable historical data applicable to similar work at the same facility, or shall be determined by pro-rating the quoted Work costs in the Contract when in similar areas of the vessel.

### H3 Overtime

The Contractor must not perform any overtime under the Contract unless authorized in advance in writing by the Contracting Authority. There will be no overtime payment for Known Work. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing the overtime performed pursuant to the written authorization. Overtime shall not be paid unless authorized in writing by the Contracting Authority. Payment for authorized overtime will be calculated as follows:

For unscheduled work, the Contractor will be paid the authorized overtime hours at the following charge-out labour rates:

- a. Time and One Half\*\*: \$ \_\_\_\_\_ per hour; or
- b. Double Time\*\*\*: \$ \_\_\_\_\_ per hour

This rate shall be a blended rate for all classes of labor, engineering and foreperson and shall include all overheads, supervision and profit.

These rates will remain firm for the duration of the Contract, including all amendments and are subject to audit if considered necessary by Canada.

\* Regular time is defined as an 8 hour work day

\*\* Overtime Time and One-Half Rate is defined as time in excess of the regular time\*,.

\*\*\* Overtime Double Time Rate is defined as Sundays and Statutory Holidays Pro-rated Prices

#### H4 Daily Services Fees

In the event of a delay in the performance of the Work and if such delay is recognized and agreed upon by the Contracting Authority as being attributable to Canada, Canada agrees to pay the Contractor the daily service fee described below for each day the Work is delayed. This fee shall be the sole liability of Canada to the Contractor for the delay.

The firm daily services fee is:

- a. For a working day: \$ \_\_\_\_\_
- b. For a non-working day: \$ \_\_\_\_\_

The above fees shall include but not be limited to all aspects of the following costs: project management services, administrative support, production services, quality assurance, material support, planned maintenance and ship services and all other resources and direct costs required to maintain the vessel at the Contractor's facility. These fees are firm and not subject to any additional charges for mark up or profit.

#### H5 Vessel, Refit, Repair or Docking Costs

The following costs must be included in the price:

1. Ship services: include all costs for ship services such as water, steam, electricity etc. that are required for vessel maintenance for the duration of the Contract.
2. Docking and undocking includes:
  - a. all costs resulting from dry docking, wharfage, security, shoring, shifting and/or moving of the vessel within the successful Bidder's facility;
  - b. the cost of services to tie up the vessel alongside and to cast off.

Unless specified otherwise, the vessel will be delivered by Canada to the successful Bidder's facility alongside a mutually agreed safe transfer point, afloat and upright, and the successful Bidder will do the same when the Work is completed. The cost of services to tie up the vessel alongside and to cast off must be included in the evaluation price.

3. Field services representatives/supervisory services: consist of the costs for field service representatives and/or supervisory services including manufacturers' representatives, engineers, etc.

These services must not be an extra charge except where unscheduled work requiring these services is added to the Contract.

4. Removals: include all costs for removals necessary to carry out the Work and will be the responsibility of the successful Bidder regardless if they are identified in the specification, except those removals not apparent when viewing the vessel or examining the drawings. The successful Bidder will also be responsible for safe storage of removed items and reinstallation of all items on completion of the Work. The successful Bidder will be responsible for renewal of components damaged while in their custody including during removal or reinstallation.
5. Sheltering, staging, crange and transportation: include the cost of all sheltering, staging including handrails, carnage and transportation to carry out the Work as specified.

The successful Bidder will be responsible for the cost of any necessary modification of these facilities in order to meet applicable safety regulations.

## H6 Vessel Transfer Costs

1. The evaluation price must include the cost for transferring the vessel from its home port to the shipyard/ship repair facility where the Work will be performed and the cost of transferring the vessel to its home port following completion of the Work, in accordance with the following:
  - a. The Bidder must provide the location of the shipyard/ship repair facility where it proposes to perform the Work together with the applicable vessel transfer cost from the list provided under H6, paragraph 2 of this section, which shall be entered into Annex H – Financial Bid Presentation Sheet, H1 Price for Evaluation, item D);
  - b. If the list provided under H6, paragraph 2 of this section does not provide the shipyard/ship repair location where the Bidder intends to perform the Work, the Bidder must advise the Contracting Authority of its proposed location for performing the Work in writing at least ten (10) calendar days prior to bid closing date. The Contracting Authority will confirm to the Bidder, in writing, at least five (5) calendar days before the bid closing date, the location of the shipyard/ship repair and the applicable vessel transfer cost.

A bid that specifies a location for executing the Work which is not on the list under H6, paragraph 2 of this section and for which a notification in writing has not been received by the Contracting Authority as required, will be considered non-responsive.

2. Vessel information and list of shipyard/ship repair facilities and applicable vessel transfer costs

Vessels: CCGS Private Robertson V.C.  
Home Port: Burlington, Ontario

Transfer costs in the case of vessels transferred using a government delivery crew include the fuel cost at the vessel's most economical speed of transit and for unmanned refits only, crew transportation costs for the delivery crew based on the location of the vessel's home port and the shipyard/ship repair facility. Crew transportation costs do not include any members of the delivery crew who remain at the shipyard/ship repair facility in order to discharge project responsibility related to the vessel being transferred.

Transfer costs in the case of the vessels transferred unmanned by either commercial towing, railway, highway or other suitable means of transportation must be:

- i. included as part of the Bidder's financial bid in the case where the Bidder is responsible for the transfer; or
- ii. identified as the applicable vessel transfer cost, as given in the list below, in the case when Canada is responsible for the transfer.

### **Shipyard/Ship Repair Facility - Applicable Vessel Transfer Costs)** **Unmanned only: CCGS Private Robertson V.C.**

<b>Company</b>	<b>City/Province</b>	<b>Unmanned Transfer Cost (per Vessel)</b>
Caraquet Marine Industry Ltd.	Caraquet, NB	\$21,974.00
Canadian Maritime Engineering Limited	North Sydney, NS	\$39,242.00
Chantier Forillon	Gaspe, QC	\$19,598.00
Chantier Matane	Matane, QC	\$15,410.00
Davie Industries Inc.	Levis, QC	\$10,728.00
Heddle Marine	Hamilton, ON	\$212.00
Hike Metal Products Ltd	Wheatley, ON	\$5,717.00
MetalCraft Marine Inc.	Kingston, ON	\$3,882.00

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Oceans Industries Inc.	Saint-Bernard-Sur-Mer, QC	\$11,693.00
Oceans Industries Inc.	Quebec QC	\$10,728.00
Verreault Navigation Inc.	Les Mechins, QC	\$15,975.00

All Prices in CAD

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**ANNEX H – Appendix 1 – PRICING DATA SHEET (CCGS Private Robertson V.C.)**

PRICING DATA SHEET		
B) KNOWN WORK		
ITEM	DESCRIPTION	FIRM PRICE
<b>5.0</b>	<b>SERVICES</b>	
5.2	Berthing and Mooring	\$ _____.
5.4	Gangways	\$ _____.
5.5	Electrical Power	<del>_____.</del>
	Connection & Disconnection & kw-hr Meter	\$ _____.
	10, 000 kW-Hr	\$ _____.
5.6	Fire Main Charging Service	<del>_____.</del>
	Connection & Disconnection	\$ _____.
	1 cubic meter - non-potable water	\$ _____.
5.7	Crangage and Manlift Services	<del>_____.</del>
	Crangage \$ _____./HR x 10 HRS =	\$ _____.
	Manlift \$ _____./HR x 10 HRS =	\$ _____.
5.8	Garbage Removal	<del>_____.</del>
	16 Cubic Meter Garbage Bin (emptied daily)	\$ _____.
	Green Bin (emptied daily)	\$ _____.
5.9	Portable Toilet (weekly cleaning)	\$ _____.
5.10	Vessel Security	\$ _____.
5.11	Parking Spaces - 3	\$ _____.
5.12	Telephone Lines and High Speed Internet	<del>_____.</del>
	2 Phone Lines	\$ _____.
	1 Highs Speed Internet Connection	\$ _____.
<b>FIRM PRICE FOR ITEM 5</b>		<b>\$ _____.</b>
<b>6.0</b>	<b>Dry-Docking</b>	
6.3	Technical	\$ _____.
6.4	Proof of Performance	\$ _____.
6.5	Deliverables	\$ _____.
<b>FIRM PRICE FOR ITEM 6</b>		<b>\$ _____.</b>
<b>7.0</b>	<b>Underwater Hull Inspection and Hull Painting</b>	
7.3	Technical	\$ _____.

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	7.3.1 Underwater Hull Cleaning and Inspection	\$ _____.
	7.3.1.1 Underwater Hull Cleaning - Hydro-blast	\$ _____.
	7.3.1.5 Sea Bay - disposal of 1 cubic meter of debris	\$ _____.
	7.3.1.6 Ultrasound Readings - 200 shots	\$ _____.
	7.3.2 Underwater Hull Repairs	\$ _____.
	7.3.2.1. Coating FSR	\$ _____.
	7.3.2.2 50 Meters of Plate Seam and Butt Weld Renewal	\$ _____.
	7.3.2.4 Sea Chest Grate Modification	\$ _____.
	7.3.3 Underwater Hull Coating System Inspection	\$ _____.
	7.3.3.3 200 square meters Underwater Hull Coating System Renewal	\$ _____.
	7.3.2.4.1 OPTIONAL ITEM A - Hull Enclosing Structure - full hull	\$ _____.
	7.3.2.4.1 OPTIONAL ITEM B - Hull Enclosing Structure - 10 meter Length	\$ _____.
	7.3.4 Draft Markings (Option)	<del>_____.</del>
	10 FWD Draft Marks	\$ _____.
	10 AFT Draft Marks	\$ _____.
	2 Plimsol Marks	\$ _____.
	7.4 Proof of Performance	\$ _____.
	7.4.2 Testing/Trials	\$ _____.
	10 Non-destructive tests (Ultrasound)	\$ _____.
	1 X-Ray Weld Inspection	\$ _____.
	7.5 Deliverables	\$ _____.
	<b>FIRM PRICE FOR ITEM 7</b>	<b>\$ _____.</b>
<b>8.0</b>	<b>Anodes</b>	
	8.3 Technical	\$ _____.
	8.3.2 20 Hull Anodes	\$ _____.
	8.3.3 3 Sea Chest Anodes	\$ _____.
	8.3.4 2 Bow Thruster Anodes	\$ _____.
	8.4 Proof of Performance	\$ _____.
	8.5 Deliverables	\$ _____.
	<b>FIRM PRICE FOR ITEM 8</b>	<b>\$ _____.</b>
<b>9.0</b>	<b>Through Hull Fitting Survey and Isolation Kit Installation</b>	
	9.3 Technical	\$ _____.
	9.3.3 Through Hull Fitting Survey Section 9.2.1.1 to 9.2.1.4 Valves	\$ _____.

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	9.3.8 Isolation Kit Installation Section 9.2.1.5 Valves	\$ _____.	
	9.4 Proof of Performance	\$ _____.	
	9.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 9</b>		<b>\$ _____.</b>
<b>10.0</b>	<b>Rudder, Rudder Bearings and Skeg Inspections</b>		
	10.3 Technical	\$ _____.	
	10.3.2 Rudder, Rudder Stock and Rudder Bearing Carrier Inspections	\$ _____.	
	10.3.3 Rudder Skeg Inspections	\$ _____.	
	10.4 Proof of Performance	\$ _____.	
	10.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 10</b>		<b>\$ _____.</b>
<b>11.0</b>	<b>Anchor, Chain and Chain Locker Inspections</b>		
	11.3.1 Anchor and Anchor Chain Inspection	\$ _____.	
	11.3.2 Chain Locker Inspection	\$ _____.	
	100 liters of liquid disposal	\$ _____.	
	10 liters of sludge disposal	\$ _____.	
	11.3.2.5 5 square meter coating renewal	\$ _____.	
	11.4 Proof of Performance	\$ _____.	
	11.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 11</b>		<b>\$ _____.</b>
<b>12.0</b>	<b>Propeller Hubs, Shaft Clearances &amp; Shaft Seals</b>		
	12.3 Technical	\$ _____.	
	12.3.1 Propeller Shaft Seals	\$ _____.	
	12.3.1.1 Propeller Shaft Seal - FSR	\$ _____.	
	12.3.2 Propeller Shaft Clearances	\$ _____.	
	12.3.3 Propeller Shaft Removal	\$ _____.	
	12.3.3.1 Propeller Shaft Removal - FSR	\$ _____.	
	12.3.4 Propeller Hubs and Blade Removal	\$ _____.	
	12.3.4.1 Propeller Hubs and Blade Removal - FSR	\$ _____.	
	12.3.6 Propeller Shaft Installations	\$ _____.	
	12.4 Proof of Performance	\$ _____.	
	12.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 12</b>		<b>\$ _____.</b>
<b>13.0</b>	<b>Bow Thruster Gear Oil and Seal Change</b>		

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13.4	13.3 Technical	\$ _____.	
	13.4 Proof of Performance	\$ _____.	
	13.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 13</b>		\$ _____.
<b>14.0</b>	<b>Sewage Sludge Tank and Black Water Tank</b>		
	14.3 Technical	\$ _____.	
	14.3.1 Tank Cleaning	\$ _____.	
	14.3.1.4 200 liters of liquid waste disposal (Dirty Oil Tank)	\$ _____.	
	14.3.1.4 20 liters of solid waste disposal (Dirty Oil Tank)	\$ _____.	
	14.3.1.8 100 liters of liquid waste disposal (Sewage Sludge Tank)	\$ _____.	
	14.3.1.8 20 liters of solid waste disposal (Sewage Sludge Tank)	\$ _____.	
	14.3.1.11 100 liters of liquid waste disposal Black Water Tank)	\$ _____.	
	14.3.1.11 15 liters of solid waste disposal (Black Water Tank)	\$ _____.	
	14.3.2 Coating System Touch Up - Dirty Oil Tank - 5 square meters	\$ _____.	
	14.3.3 Coating System Touch Up - Sewage and Black Water Tanks - 5 square meters	\$ _____.	
	14.4 Proof of Performance	\$ _____.	
	14.5 Deliverables	\$ _____.	
	<b>FIRM PRICE FOR ITEM 14</b>		\$ _____.
<b>15.0</b>	<b>Potable Water Tanks</b>		
	15.3 Technical	\$ _____.	
	15.3.1 Tank Cleaning	\$ _____.	
	15.3.1.4 Tank Cleaning - .5 cubic meter water removal per tank	\$ _____.	
	15.3.2 Tank Coating System Touch-Up	\$ _____.	
	15.3.2.1 Coating System FSR	\$ _____.	
	15.3.2.2. 10 square meters between 2 tanks	\$ _____.	
	15.4 Proof of Performance	\$ _____.	
	15.5 Deliverables	\$ _____.	
<b>FIRM PRICE FOR ITEM 15</b>		\$ _____.	
<b>B) KNOWN WORK – TOTAL FIRM PRICE</b>		\$ _____.	

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## **ANNEX I – VESSEL CUSTODY**

### **I1 Vessel Custody**

1. This work is going to take place with the vessel “out of commission” and therefore in the care, control and custody of the Contractor.
2. An ACCEPTANCE CERTIFICATE – ASSUMPTION OF CUSTODY OF CANADIAN GOVERNMENT SHIPS BY CONTRACTORS (attached as Annex I - Appendix 1) shall be completed as required and a copy passed to the Inspection Authority.
3. To facilitate this turnover, representatives of the Contractor and Canada shall confirm the vessel condition of the vessel.
4. A vessel condition report shall be appended to the above noted Certificate and shall be accompanied by colour photographs and/or video in either conventional or digital format.
5. When the vessel is to be returned to the care, control and custody of Canada, an ACCEPTANCE CERTIFICATE – RESUMPTION OF CUSTODY OF CANADIAN GOVERNMENT SHIPS BY THE CLIENT DEPARTMENT (attached as Annex I - Appendix 2) shall be completed and a signed copy passed to Canada for distribution.

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**ANNEX I – Appendix 1 - ACCEPTANCE CERTIFICATE**

ASSUMPTION OF CUSTODY OF CANADIAN GOVERNMENT SHIPS BY CONTRACTORS

ACCEPTANCE OF \_\_\_\_\_.

1. The undersigned, on behalf of the Department of Canadian Coast Guard and of \_\_\_\_\_ acknowledge to have handed over and receive respectively CCGS Carriere for the purpose of refit, all in accordance with the terms and conditions of PWGSC Contract Number \_\_\_\_\_ and such documents which form part of said Contract.
2. It is mutually agreed by all parties that the condition report by compartment or area shall be considered as an addendum to this agreement; and shall be a valid document in the taking over of the vessel by the Contractor, even if the inspection and signing occur after the signing of the agreement but within the agreed ten (10) day period.

SIGNED AT \_\_\_\_\_ PROVINCE \_\_\_\_\_ ON

THE \_\_\_\_\_ DAY OF \_\_\_\_\_ (Month), 2014,

AT \_\_\_\_\_ HOURS.

FOR: \_\_\_\_\_  
(CONTRACTOR)

FOR: \_\_\_\_\_  
Department of Canadian Coast Guard

WITNESSED BY: \_\_\_\_\_  
Public Works and Government Services Canada

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**ANNEX I – Appendix 2 - ACCEPTANCE CERTIFICATE**

ACCEPTANCE CERTIFICATE

RESUMPTION OF CUSTODY OF CANADIAN GOVERNMENT SHIPS BY THE CLIENT DEPARTMENT

ACCEPTANCE OF \_\_\_\_\_.

1. The undersigned, on behalf of \_\_\_\_\_ and of the Department of Canadian Coast Guard, acknowledge to have handed over and to have received respectively the CCGS Carriere, said vessel having been received by \_\_\_\_\_ on \_\_\_\_\_ (date), for the purpose of refit in accordance with the terms and conditions of PWGSC Contract Number \_\_\_\_\_.
2. It is mutually agreed by all parties that the liabilities and responsibilities of \_\_\_\_\_, as defined in Article 9 of PWGSC 1029 – Supplemental General Conditions for Ship Repairs, for a vessel out of commission, shall automatically cease as at \_\_\_\_\_ (hours) on \_\_\_\_\_ (date).
3. That effective from \_\_\_\_\_ (hours) on the \_\_\_\_\_ (date), Article 8 of PWGSC 1029 for a vessel in commission shall apply, and that responsibility of the care and protection of said vessel shall revert to Canada.

SIGNED AT \_\_\_\_\_ PROVINCE \_\_\_\_\_ ON

THE \_\_\_\_\_ DAY OF \_\_\_\_\_ (Month), 2014,

AT \_\_\_\_\_ HOURS.

FOR: \_\_\_\_\_  
(CONTRACTOR)

FOR: \_\_\_\_\_  
Department of Canadian Coast Guard

WITNESSED BY: \_\_\_\_\_  
Public Works and Government Services Canada

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**ANNEX I – Appendix 3 - ACCEPTANCE CERTIFICATE**

ASSUMPTION OF CUSTODY OF CANADIAN GOVERNMENT SHIPS BY CONTRACTORS

ACCEPTANCE OF \_\_\_\_\_.

1. The undersigned, on behalf of the Department of Canadian Coast Guard and of \_\_\_\_\_ acknowledge to have handed over and receive respectively CCGS Teather for the purpose of refit, all in accordance with the terms and conditions of PWGSC Contract Number \_\_\_\_\_ and such documents which form part of said Contract.
2. It is mutually agreed by all parties that the condition report by compartment or area shall be considered as an addendum to this agreement; and shall be a valid document in the taking over of the vessel by the Contractor, even if the inspection and signing occur after the signing of the agreement but within the agreed ten (10) day period.

SIGNED AT \_\_\_\_\_ PROVINCE \_\_\_\_\_ ON

THE \_\_\_\_\_ DAY OF \_\_\_\_\_ (Month), 2014,

AT \_\_\_\_\_ HOURS.

FOR: \_\_\_\_\_  
(CONTRACTOR)

FOR: \_\_\_\_\_  
Department of Canadian Coast Guard

WITNESSED BY: \_\_\_\_\_  
Public Works and Government Services Canada

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030mdF2599-155003

Buyer ID - Id de l'acheteur  
030md  
CCC No./N° CCC - FMS No./N° VME

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**ANNEX I – Appendix 4 - ACCEPTANCE CERTIFICATE**

ACCEPTANCE CERTIFICATE

RESUMPTION OF CUSTODY OF CANADIAN GOVERNMENT SHIPS BY THE CLIENT DEPARTMENT

ACCEPTANCE OF \_\_\_\_\_.

1. The undersigned, on behalf of \_\_\_\_\_ and of the Department of Canadian Coast Guard, acknowledge to have handed over and to have received respectively the CCGS Teather, said vessel having been received by \_\_\_\_\_ on \_\_\_\_\_ (date), for the purpose of refit in accordance with the terms and conditions of PWGSC Contract Number \_\_\_\_\_.
2. It is mutually agreed by all parties that the liabilities and responsibilities of \_\_\_\_\_, as defined in Article 9 of PWGSC 1029 – Supplemental General Conditions for Ship Repairs, for a vessel out of commission, shall automatically cease as at \_\_\_\_\_ (hours) on \_\_\_\_\_ (date).
3. That effective from \_\_\_\_\_ (hours) on the \_\_\_\_\_ (date), Article 8 of PWGSC 1029 for a vessel in commission shall apply, and that responsibility of the care and protection of said vessel shall revert to Canada.

SIGNED AT \_\_\_\_\_ PROVINCE \_\_\_\_\_ ON

THE \_\_\_\_\_ DAY OF \_\_\_\_\_ (Month), 2014,

AT \_\_\_\_\_ HOURS.

FOR: \_\_\_\_\_  
(CONTRACTOR)

FOR: \_\_\_\_\_  
Department of Canadian Coast Guard

WITNESSED BY: \_\_\_\_\_  
Public Works and Government Services Canada

## ANNEX J - DELIVERABLES / CERTIFICATIONS

### J1 Mandatory Tender Deliverables Check List

Notwithstanding deliverable requirements specified within the bid solicitation and its associated Statement of Work (Annex A), mandatory deliverables that must be submitted with the Bidder's tender to be deemed responsive, are summarized below.

The Bidder must submit a completed Annex J1 – Deliverables/Certifications.

The following are mandatory and the Bidder's submission will be evaluated against the requirements as defined herein. The Bidder must be determined to be compliant on each item to be considered responsive.

Item	Description	Completed and Attached
1	Invitation to Tender document part 1, page 1, completed and signed;	
2	Completed Annex H - Financial Bid Presentation Sheet, clauses H1 through H7;	
3	Completed Pricing Data Sheet, as per Annex H – Appendix 1 & 2, as detailed in PART 3, article 3.2, Section II;	
4	Completed Annex J1 Deliverables/Certifications;	
5	Changes to any applicable laws as per PART 2 – Bidder Instructions, article 2.4;	
6	Integrity provisions – Associated information, as per PART 5 – Certifications, 5.1.1;	
7	Vessel transfer cost as per Annex H – article H6, 2;	
8	Docking Facility, as per clause 6.3	
9	Proof of good standing with the Workers' Compensation Board, as per PART 6 – Financial and other Requirements, article 6.4;	
10	Proof of valid Labour Agreement or similar instrument covering the work period, as per PART 6 – Financial and other Requirements, article 6.5;	
11	Preliminary work schedule as per PART 6 – Financial and other Requirements, article 6.6;	
12	Fueling and Disembarking Procedures as per PART 6 – Financial and other Requirements, article 6.7;	
13	If registered its valid ISO 9001-2008 Certification, as per PART 6 – Financial and other Requirements, article 6.8;	
14	Objective evidence of documented Health and Safety System as per PART 6 – Financial and other Requirements, article 6.9;	
15	Objective evidence of documented Fire Protection, Fire Fighting and Training Procedure as per PART 6 – Financial and other Requirements, article 6.10;	
16	Insurance Requirements as per PART 6 – Financial and other Requirements, article 6.12;	
17	Proof of welding certification as per PART 6 – Financial and other Requirements, article 6.13;	
18	Project Management as per PART 6 – Financial and other Requirements, article 6.14;	
19	List of subcontractors as per PART 6 – Financial and other Requirements, article 6.15;	
20	Example of its Quality Control Plan as per PART 6 – Financial and other Requirements, article 6.16;	
21	Example of an Inspection and Test Plan as per PART 6 – Financial and other Requirements, article 6.17;	
22	Details of Environmental Emergency Response Plan, Details of Formal Environmental	

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**J2 Deliverables after Contract Award**

Item	Description	Reference	Due by:
1	Insurance requirements as per Annex D	Article 7.12 and Annex D	Ten (10) working days after Contract Award
2	Revised work schedule	Article 7.16	five (5) calendar days after Contract Award
3	The Contractor's Quality Control Plan	Article 7.21	five (5) calendar days after Contract Award
4	The list of Government specialized loaned equipment that the Contractor intends to request	Article 7.28	Three (3) calendar days after Contract Award