



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Réception des soumissions - TPSGC / Bid

Receiving - PWGSC

1550, Avenue d'Estimauville

1550, D'Estimauville Avenue

Québec

Québec

G1J 0C7

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

TPSGC/PWGSC

601-1550, Avenue d'Estimauville

Québec

Québec

G1J 0C7

Title - Sujet Dry Docking A Leblanc	
Solicitation No. - N° de l'invitation F3775-16N640/A	Date 2016-09-15
Client Reference No. - N° de référence du client F3775-16N640	GETS Ref. No. - N° de réf. de SEAG PW-\$QCL-036-16869
File No. - N° de dossier QCL-6-39141 (036)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-10-13	
Time Zone Fuseau horaire Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Gagnon, Mathieu	Buyer Id - Id de l'acheteur qcl036
Telephone No. - N° de téléphone (418) 649-2883 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: NGCC A. LEBLANC Pêches et Océans Canada - Garde côtière 101, boulevard Champlain QUEBEC Québec G1K7Y7 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

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qc1036
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PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation and resulting contract document is divided into seven parts plus 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 and states that the Bidder agrees to be bound by the clauses and conditions contained in all parts of 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 Security, Financial and Other Requirements: includes specific requirements that must be addressed by bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Requirement, the Basis of Payment and other annexes.

1.2 Summary

- (i) Requirement:
 - a) to carry out the docking, maintenance and alterations of the Canadian Coast Guard Ship (C.C.G.S.) A. Leblanc in accordance with the associated Technical Specifications attached as Annex A and all related drawings.
 - b) to carry out any approved unscheduled work not covered in paragraph a) above.
- (ii) 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.
- (iii) 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 Ten Annex 1001.2b Paragraph 1, however, it is subject to the Agreement on Internal Trade (AIT) and will be limited to suppliers in Eastern Canada in accordance with Shipbuilding, Refit, Repair and Modernization Policy (1996-12-19).

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

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

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

The 2003 (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 Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

You can also submit your bid by facsimile at (1) 418-648-2209, by the date, time and place indicated on page 1 of the bid solicitation.

2.3 Enquiries - Bid Solicitation

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

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

2.4 Applicable Laws

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

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

2.5 Bidders' Conference (Not mandatory)

A bidders' Conference chaired by the Contracting Authority will be convened on board vessel CCGS A. Leblanc at 9 am, September 27th, 2016. The vessel will be moored at Section 17 in the Port of Quebec, Quebec, QC. **An attendance confirmation is required before 11:00 am, September 23rd, 2016, otherwise the bidders' conference will be cancelled.** Bidders must make sure to wear the required safety equipment, including; helmet, boots and goggles.

It is recommended that the Bidder or a representative of the Bidder attend the Bidders' Conference in order to review the Scope of the Work required and to receive additional information and clarifications. Bidders are to communicate with the Contracting Authority prior to the conference to confirm attendance. Bidders that do not attend are not precluded from submitting a bid. Bidders are to provide the Contracting Authority with the names of their representatives no later than two days prior to the conference. The Contracting Authority will have an attendance form which is to be signed by the Bidder's representative(s) in attendance. Bidders are advised that any clarifications or changes resulting from the Bidder's conference and/or the subsequent viewing of the vessel shall be included as an amendment to the bid solicitation document.

2.6 Viewing – Vessel (Not mandatory)

A visit of the vessel will be held immediately after the bidders' conference.

2.7 Work Period – Marine - Bid

Work must commence and be completed as follows:

Start of Work: October 31st, 2016 or as per ship availability.

End of Work: November 21st, 2016 or three (3) weeks after start of Work. (At the earlier date.)

The Bidder agrees through submission of its response to the bid solicitation that the above time frame provides an adequate period to perform the subject work and absorb a reasonable amount of unscheduled work; and further, 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.

2.8 Docking Facility

Before award of Contract, the successful Bidder may be required to demonstrate to the satisfaction of Canada that the certified capacity of the dry docking facility to be used for the work is adequate for the anticipated loading as specified in the related dry docking plans and other documents. The successful Bidder will be notified in writing and be allowed a reasonable period of time to provide detailed keel block load distribution sketches and blocking stability considerations, along with the supporting calculations to clearly show the adequacy of the proposed docking arrangement.

At bids closing date, the Bidder must provide current (providing there is no end date on the certificate submitted, then it is to have been issued within the past two years) and valid certification of the capacity and condition of the docking facility to be used for the Work.

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, in fact, preclude the facility from being considered as a possible dry docking site.

2.9 List of Proposed Sub-contractors

If the bid includes the use of subcontractors, the Bidder agrees, upon written request from the Contracting Authority, to 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 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 \$5000.00

2.10 Quality Plan - Solicitation

At bids closing date the Bidder shall provide an example of its Quality Plans applied to similar former projects. The Plan must be in the same format that will be used after award of contract.

2.11 Inspection and Test Plan

At bids closing date the Bidder may be required to provide an example of its Inspection Plans for each item of the specifications.

2.12 Vessel Refit, Repair or Docking - Cost

All charges, fees expenses and disbursements incidental to the carrying out of the Work, including all items described in Supplemental General Conditions 1029 (2010-08-16) Ship Repair, section (07), are included in the Evaluation Price (and in the Contract Price under the Contract), including, without limitation:

1. **Services:** include all costs for ship services such as water, steam, electricity, etc., 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 is included in the Evaluation Price

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3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
 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.
 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 successful Bidder will be responsible for the cost of any necessary modification of these facilities to meet applicable safety regulations.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

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

- Section I: Management Bid (1 hard copy)
- Section II: Financial Bid (1 hard copy)
- Section III: Certifications Requirements (1 hard copy)

Prices must appear in the financial bid only (Annex I) and Appendix 1 to Annex I. No prices must be indicated in any other section of the bid.

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

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

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

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

Section I: Management Bid

The Management Bid should be concise and should include all the certifications and other requirements as noted in Parts 4 and 6.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet Annex I and the detailed Pricing Data Sheet, Appendix 1 to Annex I. The total amount of applicable taxes is to be shown separately, if applicable.

Section III: Certification Requirements

Bidders must submit the certifications required under Part 5.

3.1.2 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. The anticipated cost of the Work will be included in the evaluation of bids. The overall total cost will be calculated by including an estimated amount of additional person hours (and/or material) multiplied by a firm hourly charge-out labour rate and is added to the firm price for the Work.

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The overall total referred to as the "Evaluation Price" will be used for evaluating the bids. The estimated 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 work.

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, management and financial evaluation criteria specified below.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Financial Bid

Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet Annex "I" and the detailed Pricing Data Sheet, Appendix 1 to Annex "I". The total amount of Goods and Services Tax or Harmonized Sales Tax is to be shown separately, if applicable.

4.1.1.1 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. The anticipated cost of the Work will be included in the evaluation of bids. The overall total cost will be calculated by including an estimated amount of additional person-hours (and/or material) multiplied by a firm hourly charge-out labour rate and is added to the firm price for the Work.

The overall total referred to as the "Evaluation Price" will be used for evaluating the bids. The estimated 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 work.

4.1.2 Mandatory Requirements

Bids will be assessed in accordance with the entire requirement of the bid solicitation including compliance with the mandatory certifications and table of deliverable requirements as detailed in Parts 2, 4, 5 and 6. Only those bids which are found to meet all the mandatory requirements within the specified time frames will be deemed responsive.

4.1.3 Table of Mandatory Requirements to be met by bid closing

Notwithstanding deliverable requirements specified anywhere else within this solicitation and its associated Technical Specification, the following are the only mandatory deliverables that must be submitted with the Bid at the time of bid closing. The following are mandatory and the Bidder must be compliant on each item to be considered responsive.

Item	Description	Completed and attached
1	Completed Annex "I" Financial Bid presentation Sheet;	
2	Completed Appendix 1 to Annex "I" Price per item sheet;	
3	Letter or proof of Insurance as per article 6.13 of Part 6;	
4	Examples of quality and inspections plans, as per articles 2.10 and 2.11	

4.1.4 Other information upon request only

The following information, which supports the bid, may be requested by the Contracting Authority from the bidder and it must be provided within **two (2)** working days of the written request:

Item	Description	Completed and attached	To be forwarded if requested by the CA
1	Current and valid certification of the capacity and condition of the docking facility, as per clause 2.8 of Part 2;		Prior to contract award
2	Proof of good standing with Worker's Compensation Board as per clause 6.6 of Part 6;		Prior to contract award
3	Proof of welding certification, as per clause 6.7 of Part 6;		Prior to contract award
4	Proof of valid Labor Agreement or similar instrument covering the work period as per clause 6.8 of Part 6;		Prior to contract award
5	ISO Registration Certificate or Quality Assurance Documentation, as per article 11 of Part 6		Prior to contract award
6	Environment Protection as per article 6.12 Part 6		Prior to contract award
7	List of Proposed Sub-contractors		Prior to contract award
8	Annex "J" – Pricing Data Sheets		Prior to contract award

4.1.5 Deliverables after Contract award

Item	Description	Must be supplied after contract award, within
1	Insurance Requirements as per article 7.11, Part 7;	10 calendar days
2	Work Schedule and reports as per item 7.16, Part 7.	5 calendar days

4.2 Basis of Selection

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

4.3 Public Bid Opening

A public bid opening will be held in Public Works and Government Services Canada, 601-1550, D'Estimauville Ave., Québec, Qc at 02:00 PM (EDST) on the date show at the first page.

Following solicitation closing, bid results may be obtained by calling at No. (418) 649-2888.

PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION

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

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

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

5.1 Certifications Required with the Bid

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

5.1.1 Integrity Provisions - Declaration of Convicted Offences

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

5.2 Certifications Precedent to Contract Award and Additional Information

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

5.2.1 Integrity Provisions – Required Documentation

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

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

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

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

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Requirement *(Not used)*

6.2 Financial Requirements *(Not used)*

6.3 Accommodation

Bidder shall be responsible to provide accommodation in accordance with H.D.-2 of Annex A paragraph 2.2.9 for the duration of the Contract.

6.4 Parking

Bidder shall be responsible to provide parking and services in accordance with H.D.-2 of Annex A paragraph 2.2.10 for the duration of the Contract.

6.5 Material and Supply Support *(Not used)*

6.6 Workers' Compensation - Letter of Good Standing

It is mandatory that the Bidder has an account in good standing with the Provincial Workers Compensation Board/Commission.

At bids closing date the Bidder must submit a certificate or Letter of Good Standing from the applicable Workers Compensation Board/Commission. Failure to provide this information will render the bid non responsive.

6.7 Welding Certification

Welding must only be undertaken by a company Certified by the Canadian Welding Bureau (CWB) to the requirements of the following Canadian Standards Association (CSA) standards:

(a) CSA Standards W47.1-03, latest revision – Certification of Companies for Fusion Welding of Steel Division 2 Certification as a minimum.

(b) CSA Standards W47.2, latest revision – Certification of Companies for Fusion Welding of Steel Structures Division 2 Certification as a minimum.

In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.

Before the commencement of any fabrication work, and upon request from the Inspection 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.

6.8 Valid Labour Agreement

If the Bidder has a labour agreement, or other suitable instrument, in place with its unionized labour or workforce, it must be valid for the proposed period of any resulting contract.

At bids closing date the Bidder must provide evidence of that agreement or other suitable instrument.

6.9 Work Schedule and Reports (*Not used*)

6.10 Fueling and De-fueling Crown Vessels (*Not used*)

6.11 ISO 9001:2000 - Quality Management Systems

At bids closing date the Bidder must provide its current ISO Registration Documentation indicating its registration to ISO 9001:2000.

Documentation and procedures of bidders not registered to the ISO standards may be subject to a Quality System Evaluation (QSE) by the Inspection Authority before award of a contract.

6.12 Environmental Protection

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

6.13 Insurances Requirements

At bids closing date the Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Annex "C".

PART 7 - RESULTING CONTRACT CLAUSES

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

1. Requirement

The contractor must :

- a) to carry out the docking, maintenance and alterations of the Canadian Coast Guard Ship (C.C.G.S.) A. Leblanc in accordance with the associated Technical Specifications attached as Annex A and all related drawings.
- b) carry out any approved unscheduled work not covered in paragraph a) above.

2. Standard Clauses and Conditions

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

2.1 General Conditions

2030, (2016-04-04), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract. (except for paragraph 26 "*Liability*" which is deleted in its entirety and replace by the item 7.42 below).

Paragraph 22 "Warranty" of 2030, General Conditions – Higher Complexity – Goods, is amended in the Annex " E " - Warranty.

2.2 Supplemental General Conditions

From beginning to end of work:

Unmanned ship:

1029 (2010-08-16) Ship Repairs, excluding section 08 apply to and form part of the Contract.

On required basis only:

Manned ship:

1029 (2010-08-16) Ship Repairs, excluding section 09 apply to and form part of the Contract.

3. Security Requirement

There is no security requirement associated with this Statement of Work

4. Term of Contract

The period of the Contract is from date of Contract to the acceptance of the work by Canada.

4.1. Work Period – Marine – Contract

Work must commence and be completed as follows:

Work must commence and be completed as follows:

Start of Work: October 31st, 2016 or as per ship or dry-dock availability.

End of Work: November 21st, 2016 or three (3 weeks after start of Work. (At the earlier date.)

The Contractor agrees that the above time frame provides an adequate period to perform the subject work and absorb a reasonable amount of unscheduled work; and further, that it has sufficient material and human resources allocated or available to complete the subject work and a reasonable amount of unscheduled work within the Work Period.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Mathieu Gagnon
Supply Chief (marine)
Public Works and Government Services Canada
Eastern Quebec Directorate, Marine Section

Telephone: 418-649-2883
Facsimile: 418-648-2209
E-mail address: mathieu.gagnon@pwgsc-tpsgc.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.

5.2 Technical Authority (Will be filled in at contract award)

The Technical Authority for the Contract is:

Name : _____
Title : _____
Telephone: _____
Facsimile: _____
E-mail address: _____

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the 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.

5.2.1 Technical Representative (Will be filled in at contract award)

The Technical Representative for the Contract is:

Name : _____
Title : _____
Telephone: _____
Facsimile: _____
E-mail address: _____

The Technical Representative is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Representative; however, the Technical Representative 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.

5.3 Inspection Authority/Inspector

The Inspection Authority for the Contract is:

Same as paragraph 5.2.1 above.

The Inspection Authority is the representative of the department or agency for whom the Work is being performed under the Contract and is responsible for 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.

5.4 Contractor's Representative (Will be filled in at contract award)

The Contractor's Representative for the Contract is:

Name : _____
Title : _____
Telephone: _____
Facsimile: _____
E-mail address: _____

6. Payment

6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm price indicated in Annex B. Goods and Services Tax or Harmonized Sales Tax is extra, if applicable. Payment for unscheduled work will be done in accordance with Basis of Payment outlined at Annex B.

6.2 Payment Terms - Progress Payments

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 90 percent of the amount claimed and approved by Canada if:
 - (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (b) the amount claimed is in accordance with the basis of payment;
 - (c) the total amount for all progress payments paid by Canada does not exceed 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.

6.3 Method of Payment

SACC Manual Clause C6000C (2011-05-16) Limitation of Price

7. Invoicing Instructions

7.1 Invoicing Instructions - Progress Payment Claim

The Contractor must submit invoices that contain the information required by the Général Conditions 2030 (2016-04-04) Part 13.

7.2 Invoicing

Write the name of the contact person:

██

Invoice to be made to the name of:

DFOinvoicing-MPOfacturation@df0-mpo.gc.ca

Electronic Copy to be sent for verification to: michael.woods@pwgsc-tpsgc.gc.ca

8. Certifications

- 8.1** Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the entire contract period. If the Contractor does not comply with any certification or 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.

9. Applicable Laws

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

10. Priority of Documents

If there is a discrepancy between the wordings 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, (2016-04-04), General Conditions - Higher Complexity - Goods
- d) Annex A, Requirement;
- e) Annex B, Basis of Payment;
- f) Annex C, Insurance Requirements;
- g) Annex D, Inspection/Quality Assurance/Quality Control;
- h) Annex E, Warranty;
- i) Annex F, Vessel Custody
- j) the Contractor's bid dated _____

11. Insurance Requirements

The Contractor must comply with the insurance requirements specified in Annex C. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements will not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible to decide 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 will be at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within **ten (10)** calendar days after the date of award of the Contract a Certificate of Insurance including details of the insurance coverage, exclusions, deductibles and conditions and confirming that the insurance policy complying with the requirements is in force. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

12. Financial Security *(Not used)*

13. Accommodation

Contractor shall be responsible to provide accommodation in accordance with item H.D.-2 paragraph 2.2.9 of Annex A for the duration of the Contract.

14. Parking

Contractor shall be responsible to provide parking spots and services in accordance with item H.D-2 paragraph 2.2.10 of Annex A for the duration of the Contract.

15. Sub-contracts and Sub-contractor 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 the Inspection Authority.

16. Work Schedule and Reports

No later than **five (5)** calendar days after contract award, the preliminary schedule must be revised and expanded as necessary and resubmitted before commencement of the Work.

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.

Production work schedules must be revised and resubmitted before each Progress Meeting. The revised schedules must show the effect of progressed work and approved work arising. Changes in scheduled completion dates due to unscheduled work will not be accepted except as negotiated under Design Change or Additional Work, Article 26.

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.

18. 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 ten (10) calendar 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.

19. 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 Inspection 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

20. Material and Supply Support *(Not used)*

21. ISO 9001:2000 - Quality Management Systems

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

ISO 9001:2000 - Quality management systems - Requirements, published by the International Organization for Standardization (ISO), current edition at date of submission of the Contractor's bid with the exclusion of the following requirement: 7.3 Design and development.

It is not the intent of this clause to require that the Contractor be registered to the applicable standard; however, the Contractor's quality management system must address each requirement contained in the standard.

21.2 Assistance for Government Quality Assurance (GQA):

The Contractor must provide the Inspection Authority with the accommodation and facilities required for the proper accomplishment of GQA and must provide any assistance required by the Inspection Authority for evaluation, verification, validation, documentation or release of product.

The Inspection Authority must have the right of access to any area of the Contractor's or Subcontractor's facilities where any part of the Work is being performed. The Inspection Authority must be afforded unrestricted opportunity to evaluate and verify Contractor conformity with Quality System procedures and to validate product conformity with contract requirements. The Contractor must make available, for reasonable use by the Inspection Authority, the equipment necessary for all validation purposes. Contractor personnel must be made available for operation of such equipment as required.

When the Inspection Authority determines that GQA is required at a subcontractor's facilities, the Contractor must provide for this in the purchasing document and forward copies to the Inspection Authority, together with relevant technical data as the Inspection Authority may request.

The Contractor must notify the Inspection Authority of non-conforming product received from a subcontractor when the product has been subject to GQA.

22. 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 Quality management - Guidelines for quality plans., approved by the Inspection and Technical Authorities. The QCP shall 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 documents referenced in the QCP shall 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 and Technical Authorities.

Refer to Annex “D” for further details on the Quality Control Plan requirements.

23. Welding Certification

Welding must only be undertaken by a company Certified by the Canadian Welding Bureau (CWB) to the requirements of the following Canadian Standards Association (CSA) standards:

(a) CSA Standards W47.1-03, latest revision – Certification of Companies for Fusion Welding of Steel Division 2 Certification as a minimum.

(b) CSA Standards W47.2, latest revision – Certification of Companies for Fusion Welding of Steel Structures Division 2 Certification as a minimum.

In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.

Before the commencement of any fabrication work, and upon request from the Inspection 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.

24. Environmental Protection

The Contractor and its sub-contractors 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.

All waste disposal certificates are to be provided to the Inspection Authority, with information copies sent 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 non-compliance situations, must be competent to do so, on the basis of appropriate education, training, or experience.

25. Fueling and De-fueling a Crown Vessel

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.

26. Procedure for Design Change or Additional Work

SACC Manual Clause B5007C (2010-01-11) Design Change or Additional Work

26.1 Price Breakdown:

The Contractor must, upon request, provide a price breakdown for all unscheduled work, by specific activities with trades, person-hours, material, subcontracts and services.

26.2 Pro-rated Prices:

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

27. Equipment/Systems: Inspection/Test

Refer to Annex D for details on equipment and systems inspections and testing requirements.

28. Inspection and Test Plan

The Contractor shall, in support of their QCP, implement an approved Inspection & Test Plan (ITP).

The Contractor shall provide at no additional cost to the Crown, 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 shall forward at his expense such technical data, test data, test pieces and samples to such location as the Inspector may direct.

Refer to Annex "D" for details on Inspection and Test Plan Requirements.

29. 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 FEDERAL GOVERNMENT SHIPS BY SHIPYARDS" Appendix 1 of Annex "F" must be completed as required and a copy passed to the Inspection Authority.

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3. To facilitate this turnover, representatives of the Contractor and Canada must confirm the condition of the vessel.
 4. A vessel condition report must be appended to the above noted certificate and must be accompanied by colour photographs or videos 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 FEDERAL GOVERNMENT SHIPS BY THE CLIENT DEPARTMENT" Appendix 2 of Annex "F" must be completed and a signed copy passed to Canada for distribution.

30 a. Vessel Unmanned Refits

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 or custody of the Contractor and under its control.

30 b. Vessel Manned Refits

On a required basis only

1. The vessel will be manned during the work period and will be considered to be in commission. The vessel during that period will remain in the care or custody of Canada and under its control.
2. Fire fighting equipment must be readily accessible and made available by the Contractor should a fire emergency arise. The Contractor must take adequate precautions when burning or welding is carried out in compartments or other confined areas of the vessel.

31. Pre-Refit Meeting

A Pre-Refit meeting will be convened and chaired by the Contracting Authority at the Contractor's facility before the commencement of the work period.

32. 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.

33. Outstanding Work and Acceptance

The Inspection Authority, in conjunction with the Contractor, will prepare a list of outstanding work items towards the end of the vessel 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 Inspector on the work completion date to review and sign off the Acceptance Document. In addition to any amount held under the Warranty Holdback Clause (see section 7.3 above), a holdback of twice the estimated value of outstanding work will be held until completion of said work.

The PWGSC-TPSGC 1205 Acceptance Document is to be completed and distribution is to be made by the Public Works and Government Services Canada Inspection Authority as follows:

- (a) original to the PWGSC Contracting Authority
- (b) one copy to the Technical Authority
- (c) one copy to contractor

34. Licensing

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.

35. Hazardous Waste - Vessels

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 laws or regulations and that this will not be considered to be an excusable delay.

36. Government Site Regulations

SACC Manual Clause A9068C (2010-01-11), Government Site Regulations

37. Scrap and Waste Material

SACC Manual Clause A9055D (2010-08-16), Scrap and Waste Material

38. Stability and Weight Management

SACC Manual Clause B6100C (2008-05-12), Stability and Weight Management

39. Vessel - Access by Canada

SACC Manual Clause A9066C (2008-05-12), Vessel - Access by Canada

40. Title to Property - Vessel

SACC Manual Clause A9047C (2008-05-12), Title to Property - Vessel

41. Defence Contract

SACC Manual Clause A9006C (2012-07-16) Defence Contract

42. 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, 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 12 months after service of the original notice to terminate served by either Party pursuant to sub-article 5, above.

Solicitation No. - N° de l'invitation
F3775-16N640/A
Client Ref. No. - N° de réf. du client
F3775-16N640

Amd. No. - N° de la modif.
File No. - N° du dossier
QCL-6-39141

Buyer ID - Id de l'acheteur
qcl036
CCC No./N° CCC - FMS No/ N° VME

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7. In the event of a termination under this Article, the Contract will automatically remain in force subject to all of the same terms and conditions until the date of termination and the Contractor agrees that it will be paid in accordance with the applicable provisions as set out in the Basis of Payment, Annex B and that the Contractor's liability remains as specified in subarticles (1) through (4), above.
 8. 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.

Solicitation No. - N° de l'invitation
F3775-16N640/A
Client Ref. No. - N° de réf. du client
F3775-16N640

Amd. No. - N° de la modif.
File No. - N° du dossier
QCL-6-39141

Buyer ID - Id de l'acheteur
qc1036
CCC No./N° CCC - FMS No/ N° VME

ANNEX A

See attached documents.

ANNEX B

BASIS OF PAYMENT FIRM PRICE

Remark to Bidder: Annex B will form the Basis of Payment for the resulting contract and should not be filled in at the bid submission stage. See annex 'I' – Financial Bid Presentation Sheet.

B1 Contract Firm Price

A)	Known Work For work as stated in Clause 1.2 a), specified in Annex "A" and detailed in the attached Price Per Item Sheet Appendix 1 of Annex "I", for a FIRM PRICE of:	\$ _____
B)	Total Firm Price :	\$ _____

B2 Unscheduled Work

Payment for 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 and profit, plus net laid-down cost of materials to which will be added a mark-up of ten (10) percent, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, calculated at five (5) percent 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 term of the Contract and any subsequent amendments.

- B2.1:** Notwithstanding definitions or useage elsewhere in this document, or in the Bidder'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 B2.2 below, will not be negotiated, but will be included in the firm hourly Charge-out Labour Rate in accordance with paragraph B2.2
- B2.2:** Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Inspecting and Reporting, and Estimating will be included as *Overhead* within the *firm hourly 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 Chargeout Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

B3 Overtime

No overtime work shall be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed. Compensation for authorized overtime will be calculated in the following manner:

- a. For Known Work, the Contractor will be paid the original contract price plus agreed overtime hours paid at the following premium rates;
- b. For Unscheduled Work, the Contractor will be paid for agreed overtime hours paid at the *firm hourly Charge-out Labour Rate* above plus the following premium rates:

Premium for Time and one half: \$ _____ per hour; *or*,

Premium for Double time: \$ _____ per hour

The above premiums rates shall be calculated as follows:

Premium for time and one half:

$\frac{1}{2}$ (that portion of the firm Hourly Charge-out Labour Rate in B2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

Premium for double time:

$\frac{1}{2}$ (that portion of the Unscheduled Work firm Charge-out Labour Rate in B2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

These premiums will remain firm for the duration of the Contract, including all amendments and are subject to audit by Canada, and to retroactive adjustment if Canada discovers that the premiums have not been calculated in accordance with the formulae, above.

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 in drydock: \$ _____

(b) For a non-working day in drydock: \$ _____

(c) For a working day at the jetty: \$ _____

(d) For a non-working day at the jetty: \$ _____

The above fees shall include but not be limited to, all aspects of the following costs: 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, including all items listed in B4. These fees are firm and not subject to any additional charges for mark-up or profit.

B5 Cost of all Services is Included in Contract Price

All charges, fees expenses and disbursements incidental to the carrying out of the Work, including all items described in Supplemental General Conditions 1029 (2010-08-16) Ship Repair, section (07), are included in the Contract Price for the Work, including, without limitation:

1. **Services:** include all costs for ship services such as water, steam, electricity, etc., required for vessel maintenance for the duration of the Contract.
2. **Docking and Undocking** include:
 - (a) all costs resulting from drydocking, wharfage, security, shoring, shifting and/or moving of the vessel within the Contractor'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 Contractor's facility alongside a mutually agreed safe transfer point, afloat and upright, and the Contractor will do the same when the Work is completed.

3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
4. **Removals:** include all costs for removals necessary to carry out the Work and will be the responsibility of the Contractor whether or not they are identified in the specifications, except those removals not apparent when viewing the vessel or examining the drawings. The Contractor will also be responsible for safe storage of removed items and reinstalling them on completion of the Work. The Contractor will be responsible for renewal of components damaged during removal.
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.

ANNEX C

INSURANCE REQUIREMENTS

C.1 Ship Repairers' Liability Insurance (2014-06-26)

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 Fisheries and Oceans Canada – Canadian Coast Guard 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.

C.2 Commercial General Liability Insurance (2014-06-26)

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 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.

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- 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 similar program)
 - h) Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority 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 12 months after the completion or termination of the Contract.
 - 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.

ANNEX D

INSPECTION/QUALITY ASSURANCE/QUALITY CONTROL

D.1 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. 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 Technical 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 Inspection and Test Plan (ITP) is to be coded for identification clearly demonstrating a systematic approach similar to the following (Contractor's system should be defined in its Quality Control Plan):

(i) Prefixes for Inspections, Test 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 trial, 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

3. Inspection and Test Plan Criteria:

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

(a) All ITPs must be prepared by the Contractor in accordance with the above criteria, its Quality Plan, and must provide the following reference information:

(i) the ship's name;

(ii) the Specification item number;

(iii) equipment/system description and a statement defining the parameter which is being inspected;

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- (iv) a list of applicable documents referenced or specified in the inspection procedure;
 - (v) the inspection, test or trial requirements specified in the Technical Specification;
 - (vi) the tools and equipment required to accomplish the inspection;
 - (vii) the environmental conditions under which the inspections are to be conducted and the tolerances on the inspection conditions;
 - (viii) 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;
 - (ix) name and signature of the person who prepared the plan, date prepared and amendment level; and,
 - (x) names and signatures of the persons conducting and witnessing the inspection, test or trial.

4. Contractor Imposed Testing:

Tests and trials in addition to those given in the Technical Specification must be approved by the Inspection Authority.

- (a) Amendments: Amendment action for the Inspection and Test Plans 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.

D.2 Conduct of Inspection

1. Inspections must be conducted in accordance with the ITP.
2. The Contractor must provide its own staff or subcontracted staff to conduct inspections, tests and trials; excepting that Technical Authority or Inspection Authority personnel may be designated in the specifications, in which case the Contractor must ensure that its own staff are provided in support of such inspection/test/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/trial.
4. The Contractor must ensure that personnel required for equipment operation and records taking during the inspection/test/trial are briefed and available at the start and throughout the duration of the inspection/test/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/trial and ensure that safe conditions prevail throughout the inspection/test/trial.

D.3 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/trial results, for which corrective action cannot be completed during the normal course of the inspection/test/trial, will require the Contractor to establish and record the cause of the unsatisfactory condition to the satisfaction of the Inspection Authority. Canada's representatives may assist in identification where appropriate.
4. Corrective action to remove 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/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.

D.4 Inspection and Trials Process

1. Drawings 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 Specifications. Where discrepancies are noted, the Inspection Authority will formally advise all concerned, in writing using a Discrepancy Notice. The resolution of any such discrepancy is a matter for consultation between the Contractor and other Crown Authorities.

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 trials as may be deemed necessary by the Inspection Authority to permit him to certify that the work has been performed in compliance with the provisions of the Specifications. 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 Technical Specification and, where non-conformances are noted, will issue appropriate **INSPECTION NON-CONFORMANCE REPORTS**.
 - (c) The Contract requires the implementation of a Quality Assurance/Quality Control system, so the Inspection authority must require that the Contractor 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 (e.g. inspections by a certified CWB 178.2 welding inspector), the reports of these inspections must be required before the Work is inspected by the Inspection Authority.

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- (d) The QA/QC system is a requirement, so if the documentation is presented to the Inspection Authority before an inspection stating that the Work is satisfactory but the Inspection Authority finds that the Work has not been satisfactorily inspected, the Inspection Authority must issue an Inspection Non-conformance Report against the Work and another against the failure of the Contractor's QA/QC system.
 - (e) Before carrying out any inspection, the Inspection Authority must review the requirements for the Work and the acceptance and/or rejection standards to be applied. Where more than one standard or requirement is called up and they are potentially conflicting, the Inspection Authority must refer to the order of precedence in the Contract to determine the standard or requirement to be applied.

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 complete the Report by adding an applicable signed and dated notation.
- (c) At the end 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, in accordance with the Contract and Specifications, the Contractor must schedule, co-ordinate, perform, and record all specified Tests, Trials and Demonstrations required by the Inspection Authority.
- (b) Where the Specifications contain a specific performance requirement for any component, equipment, sub-system or system, the Contractor must test such 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 performs as required by the specifications.
- (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-systems demonstration or testing, and that sub-systems are proven before system demonstration or testing.
- (d) Where the Specifications do not contain specific performance requirements for 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 Test and Inspection Plan as indicated in section D.1 above.

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- (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; Sub-contractors; etc. The Contractor must provide the Inspection Authority and other Crown Authorities with a minimum of five working days notice of each scheduled test, trial, or demonstration.
 - (g) The Contractor must keep written records of all tests, trials, and demonstrations conducted.
 - (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 starting or continuing with any sea trials for any reasonable cause including but not limited to adverse weather, visibility, equipment failure or degradation, lack of qualified personnel and inadequate compliance with safety standards.

ANNEX E

WARRANTY

General Conditions 2030 (2016-04-04) - Higher Complexity Goods, are hereby amended by deleting section 2030 22 (2014-09-25), Warranty and replacing it as follows:

E.1 Section 22 Warranty

1. At the discretion of the Minister, the Contractor will replace or make good at its own expense any finished work, excluding Government Issue incorporated therein, which becomes defective or which fails to conform to contract requirements as a result of faulty or inefficient manufacture, material or workmanship.

2. Notwithstanding prior acceptance of the finished work, and without restricting any other term of the Contract or any condition, warranty or provision implied or imposed by law, the Contractor hereby warrants that the following shall be free from all defects and shall conform with the requirements of the contract:

- (a) The painting of the underwater portion of the hull for a period of three hundred and sixty-five (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 three hundred and sixty-five (365) days and multiplied by the number of days remaining in the warranty period. The resultant would represent the "Dollar Credit" due to Canada from the Contractor.

- (b) All other painting Work for a period of three hundred and sixty-five (365) days commencing from the date of acceptance of the Work;
- (c) All parts and material provided by the Contractor for a period of three hundred and sixty-five (365) days commencing from the date of acceptance of such parts or material;
- (d) 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 shall extend 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. If more than one warranty period applies, in accordance with the above, to any Work, then the warranty shall be for the longest period.

4. 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.

E.2 Warranty Procedures

E2.1 Scope

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

E2.2 Definition

- a. There are a number of definitions of "warranty" most of which are intended to describe its force and effect in law. One such definition is offered as follows:

"A warranty is an agreement whereby the vendor's or manufacturer's responsibility for performance of its product is extended for a specific period of time beyond the date at which the title to the product passes to the buyer."

E2.3 Warranty Conditions

- a. General Conditions 2030, Higher Complexity - Goods are augmented by clauses incorporated into the subject Contract.
- b. The warranty periods may be stated in more than one part.
 - i. 90 days commencing from the day the PWGSC 1205 Acceptance Document is signed for workmanship provided by the contractor for the refit work specified;
 - ii. 365 days from the date of undocking the vessel for the specified areas of underwater paint and topside painting;
 - iii. 365 days commencing from the day the PWGSC 1205 Acceptance Document is signed for parts and material provided by the contractor for the refit work specified;
 - iv. Any other specific warranty periods that may be required in the contract or offered by the Contractor.
- c. The foregoing does not cover the disposition of other deficiencies that will be directly related to Technical Authority problem areas of the following nature:
 - i. items becoming unserviceable that were not included in the refit specification;
 - ii. refit specifications or other related documentation requiring amendments or corrections to increase viability; and
 - iii. work performed that is directly related to the Technical Authority.

E2.4 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.

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- 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.

E2.5 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 Warranty Claim Form 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 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 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.

E2.6 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.

E2.7 Alongside Period For Warranty Repairs and Checks

- a. If at all possible, an alongside period for the vessel is to be arranged just before the expiration of the 90 day warranty period. This alongside period is to provide time for warranty repair and check by the contractor.
- b. In respect to the underwater paint, should it become defective during the associated warranty period the contractor is only liable to repair to a value determined as follows :

"Original cost to Canada for painting and preservation of the underwater section of the hull, divided by three hundred and sixty-five (365) days and multiplied by the number of days remaining in the three hundred and sixty-five (365) days warranty period. The resultant would represent the 'Dollar Credit' due to Canada from the Contractor."
- c. The Underwater paint system, before expiration of the warranty, should be checked by divers. The Technical Authority, is to arrange the inspection and inform the Contracting Authority of any adverse results.

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File No. - N° du dossier
QCL-6-39141

Buyer ID - Id de l'acheteur
qc1036
CCC No./N° CCC - FMS No/ N° VME

Appendix 1 of Annex E



Public Works and
Government
Services Canada

Travaux publics et Services
gouvernementaux Canada

Warranty Claim Réclamation De Garantie

Vessel Name – Nom de navire	File No. – N° de dossier	Contract No. - N ° de contrat
Customer Department – Ministère client		Warranty Claim Serial No. Numéro de série de réclamation de garantie
Contractor – Entrepreneur		<u>Effect on Vessel Operations</u> <u>Effet sur des opérations de navire</u> Critical Degraded Operational Non-operational Critique Dégradé Opérationnel Non-opérationnel

1. Description of Complaint – Description de plainte

Contact Information – l'information de contact

Name – Nom

Tel. No. - N ° Tél

Signature – Signature

Date

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

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File No. - N° du dossier
QCL-6-39141

Buyer ID - Id de l'acheteur
qcl036
CCC No./N° CCC - FMS No/ N° VME

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

Contractor's Name and Signature – Nom et signature de l'entrepreneur
Corrective Action - Date de modalité de reprise

Date of

Client Name and Signature - Nom et signature de client
Date

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

Date

Signature – Signature

ANNEX F

VESSEL CUSTODY

F1 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 FEDERAL GOVERNMENT SHIPS BY SHIPYARDS" (attached as Appendix 1 to this Annex F) 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 condition of the vessel.
4. A vessel condition report shall be appended to the above noted certificate and shall be accompanied by colour photographs or videos 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 FEDERAL GOVERNMENT SHIPS BY THE CLIENT DEPARTMENT" (Attached as appendix 2 to this Annex F) shall be completed and a signed copy passed to Canada for distribution.

UNMANNED REFIT:

During the majority of the contract period, the CCGS Leim shall be **unmanned**. As a result, the ship shall be placed in the care and custody of the Contractor as described in the Technical Specification (Winter Storage Specifications). However, access to the vessel shall not be denied to CCG, PWGSC and TCMSB personnel by the Contractor. Every effort will be taken to ensure that vessel access by these personnel shall not interfere or conflict with the Contractor's work.

Cleaning: Contractor to ensure that all spaces, compartments and areas of the ship are "**as clean as found**" when work is completed. The cost of clean-up work shall be included in the quote for each specification item.

CCG / PWGSC Offices: notwithstanding the fact that the vessel will be unmanned, the Contractor shall respect the directives included in the Technical Specification in regard to the protection and the layout of the cabins onboard the vessel.

Parking: See Technical Specifications

GENERAL (MANNED):

The services as described in H.D-2 shall be supplied, fitted and/or connected **whenever ship's crew are living aboard the ship**. This is expected to include the time period after arrival at the Contractor's facility and prior to formal handover to the Contractor. The services shall also to be provided after the vessel has been returned to the care and custody of the ship's crew until signing of the acceptance document and departure of the ship from the Contractor's facilities. The Contractor shall be responsible for any additional disconnections and re-connections required when the ship is moved between dock / slipway and any berth at the Contractor's premises.

The Contractor is to quote a global price and daily rates for these services according to his proposed schedule which will determine the planned length of time that the vessel is not under his control.

GENERAL (UNMANNED):

The services as described in H.D-2 shall be supplied, fitted and/or connected upon formal handover to the Contractor, and maintained **throughout the period that the ship is under the Contractor's control**. Contractor to be responsible for any additional disconnections and re-connections required when the ship is moved between dock / slipway and any berth at the Contractor's premises. The Contractor is to quote a global price and daily rates for these services according to his proposed schedule which will determine the planned length of time that the vessel is under his control.

Care and Custody: During the contract period, the ship shall be placed in the custody of the Contractor who shall be responsible for all safety and security matters pertaining to the vessel. As the ship will not be de-stored, the Contractor shall provide whatever security arrangements are required to safeguard CCG and DFO equipment and material that remains onboard during the contract period.

Security Watches: During the contract period, the Contractor shall provide and maintain a continuous, **24 hour-per-day, 7 day-per-week** security watch consisting of at least **one (1)** mobile security patroller. The patroller are to provide mobile safety and security checks throughout the vessel. The patrols shall be adequate to ensure integrity against personal injury, fire and flood in accordance with Part II of the Canada Labour Code, as well as to ensure that the ship remains free from damage and/or theft resulting from unauthorized entry or activity.

Turnover: The turnover of the ship to and from the Contractor shall be carried out on a compartment-by-compartment basis with a Contractor's Representative and the Chief Engineer (or Representative) in attendance.

As part of the initial turnover, the Contractor shall provide the services of a qualified photographer (who is to be identified as a Sub-contractor) to accompany the abovementioned persons and take a minimum of **six (6)** digital colour photographs of each compartment and passageway: **one (1)** each looking forward, aft, port, starboard, up and down. The Contractor shall supply **two (2)** sets of printed copies of the photographs, bound and organized by deck level and compartment name, to the Chief Engineer within **seven (7)** days of the ship's arrival at the Contractor's facilities.

In addition to the photographs, the Contractor is to prepare compartment inspection sheets for each space for signature at the time of turnover. After sign-off, copies of the inspection sheets are to be given to the Chief Engineer and placed on the door of each compartment or in each passageway.

On completion of the photographic survey and compartment inspections, and once the inspection sheets have been posted, the Chief Engineer shall provide the Contractor's Representative with keys as required for access to all areas of the ship's interior spaces. Turnover to the Contractor shall be finalized by completion of an "Assumption of Custody Certificate" to be supplied by CCG.

When custody is returned to CCG, a "Resumption of Custody Certificate" shall be completed after completion of a second compartment inspection survey and return of all keys to the Chief Engineer.

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The Contractor shall be responsible for the safe transfer of the ship between it's pre/post-docking berth and it's docking blocks. During docking and undocking of the ship, radio contact is to be maintained between the vessel's Commanding Officer and the Contractor's Docking Officer **if the vessel is crewed at these times**. If the ship is unmanned at the docking and undocking, the safe movement of the ship shall be the sole responsibility of the Contractor.

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F3775-16N640

Amd. No. - N° de la modif.
File No. - N° du dossier
QCL-6-39141

Buyer ID - Id de l'acheteur
qc1036
CCC No./N° CCC - FMS No/ N° VME

APPENDIX 1 OF ANNEX F

ACCEPTANCE CERTIFICATE
ASSUMPTION OF CUSTODY OF FEDERAL GOVERNMENT SHIPS
BY SHIPYARDS

TURNOVER OF CUSTODY of : _____

Contract Serial Number : _____

I, _____ (Contractor's Representative) on behalf of _____
_____ take over the responsibility for the said Vessel from the Department
of Fisheries and Oceans. This take over of responsibilities is effective at _____, Province
of _____ on the _____ day of _____, 2016, at _____ hours.

(Signature - Contractor's Representative)

(Witness)

I, _____ (Vessel's Master or Chief Engineer) on behalf of the Department of
Fisheries and Oceans, turn over the custody and responsibility for the said Vessel to the
Contractor. This turn-over effective at _____, Province of _____ on the _____
day of _____, 2016, at _____ hours.

(Signature - Vessel's Master)

(Witness)

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QCL-6-39141

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qcl036
CCC No./N° CCC - FMS No/ N° VME

APPENDIX 2 OF ANNEX F

ACCEPTANCE CERTIFICATE
RESUMPTION OF CUSTODY OF FEDERAL GOVERNMENT SHIPS
BY THE CLIENT DEPARTMENT

RESUMPTION OF CUSTODY of : _____

Contract Serial Number : _____

I, _____ (Contractor's Representative) on behalf of _____
_____ turn-over the responsibility for the said Vessel to the Department of
Fisheries and Oceans. This turn-over effective at _____, Province of _____ on
the _____ day of _____, 2016, at _____ hours.

(Signature - Contractor's Representative)

(Witness)

I, _____ (Vessel's Master or Chief Engineer) on behalf of the Department of Fisheries
and Oceans, accept the resumption of custody and responsibility for the said Vessel from the
Contractor. This turn-over effective at,
_____ Province of _____ on the _____ day of _____, 2016, at _____ hours.

(Signature - Vessel's Master)

(Witness)

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ANNEX G

SECURITY REQUIREMENTS CHECK LIST

(Not used)

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ANNEX H

PROJECT MANAGEMENT SERVICES

(Not used)

ANNEX I

FINANCIAL BID PRESENTATION SHEET

10 Proposed Docking Facility Location: _____

11 Price for Evaluation

A)	Known Work For work as stated in Clause 1.2 a), specified in Annex "A" and detailed in the attached Price Per Item Sheet, Appendix 1 of Annex "I", for a FIRM PRICE of:	\$
B)	Unscheduled Work <i>Contractor Labour Cost:</i> Estimated labour hours at a firm <i>hourly Charge-out Labour Rate</i> , including overhead and profit for evaluation purpose only: 400 person hours X \$_____ per hour for a PRICE of : <i>See Note 12.1 and 12.2 below.</i>	\$ _____
C)	Daily Service Fees for evaluation purpose only <i>As per Clause 14 below</i> i) Four (4) working days in drydock X \$_____ /firm daily service fee = \$_____; plus ii) Two (2) non-working days in drydock X \$_____ /firm daily service fee = \$_____; plus iii) Four (4) working days at jetty X \$_____ /firm daily service fee = \$_____; plus iv) Two (2) non-working days at jetty X \$_____ /firm daily service fee = \$_____	\$
D)	Vessel Transfer Cost <i>As per paragraph 16 below</i>	\$
E)	EVALUATION PRICE Applicable taxes excluded [A + B + C + D]: <p style="text-align: right;">TOTAL EVALUATION PRICE of :</p>	\$ _____

12 Unscheduled Work

The Contractor will be paid for unscheduled work arising, as authorized by the Minister, calculated in the following manner:

"Number of hours (to be negotiated) X \$_____ your firm *hourly Charge-out Labour Rate* which includes *Overhead* and profit, plus net laid-down cost of materials to which shall be added a 10% mark-up, plus Applicable Taxes. 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 thereto."

- I2.1:** Notwithstanding definitions or useage elsewhere in this document, or in the Bidder'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 I2.2 below, will not be negotiated, but will be compensated for in accordance with paragraph I2.2 It is therefore incumbent upon the Bidder to enter values in the above table which will result in fair compensation, regardless of the structure of their Cost Management System.
- I2.2:** Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Inspecting and Reporting, and Estimating will be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* entered in line I2 above.
- I2.3:** 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 Chargeout Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

I3 Overtime

No overtime work shall be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed. Compensation for authorized overtime will be calculated in the following manner:

- a. For Known Work, the Contractor will be paid the original contract price plus agreed overtime hours paid at the following premium rates;
- b. For Unscheduled Work, the Contractor will be paid for agreed overtime hours paid at the quoted *Charge-out Labour Rate* plus the following premium rates:

Premium For Time and one half: \$ _____ per hour; or,

Premium For Double time: \$ _____ per hour

Premium for time and one half:

$\frac{1}{2}$ (that portion of the firm Hourly Charge-out Labour Rate in I2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

Premium for double time:

(that portion of the Unscheduled Work firm Charge-out Labour Rate in I2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

These premiums will remain firm for the duration of the Contract, including all amendments and are subject to audit by Canada, and to retroactive adjustment under the Contract if Canada discovers that the premiums have not been calculated in accordance with the formulae, above.

14 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 in drydock: \$ _____
- (b) For a non-working day in drydock: \$ _____
- (c) For a working day at the jetty: \$ _____
- (d) For a non-working day at the jetty: \$ _____

The above fees shall include but not be limited to, all aspects of the following costs: 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 including all items listed in **I5**. These fees are firm and not subject to any additional charges for mark-up or profit.

15 Cost of all Services is Included in Contract Price

All charges, fees expenses and disbursements incidental to the carrying out of the Work, including all items described in Supplemental General Conditions 1029 (2010-08-16) Ship Repair, section (07), are included in the Evaluation Price for the Work, including, without limitation:

1. **Services:** include all costs for ship services such as water, steam, electricity, etc., required for vessel maintenance for the duration of the Contract.
2. **Docking and Undocking** include:
 - (a) all costs resulting from drydocking, 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.

3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
4. **Removals:** include all costs for removals necessary to carry out the Work and will be the responsibility of the Contractor 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.

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

16 Vessel Transfer Costs

1. The Evaluation Price shall include the cost for transferring the vessel from its home port to the shipyard/ship repair facility where the majority of the Work will be undertaken and the cost of returning the vessels to their home port following completion of the Work, in accordance with the following:
- (a) The bidder shall enter on Line **10**, the location of the shipyard/ship repair facility where it proposes to undertake the Work. The applicable vessels' transfer costs provided under section 3. of this clause shall be entered into table I1.
- (b) Should the list in section 3. of this clause not provide the shipyard/ship repair location where the bidder intends to undertake the Work, then the bidder must advise the Contracting Authority, in writing, no later than **five calendar days** prior to the bid closing date, of its proposed location for undertaking the Work. The Contracting Authority will acknowledge to the bidder, in writing, no later than **three calendar** days prior to the bid closing date, the location of the shipyard/ship repair and confirm the applicable vessel transfer cost.

A Bid that specifies a location for undertaking the Work which is not in the list under section 3. of this clause, and for which a notification in writing has not been received by the Contracting Authority five days prior to the bid closing date, shall be deemed to be non-responsive.

2. Transfer costs, in this case, are based on using a government delivery crew and include the fuel cost at the vessel's most economical speed of transit and crew transportation costs for the delivery crew based on the location of the vessel's home port and the shipyard/ship repair facility.
3. Round trip transfer costs applicable to the following facilities are:

Company	City	Unmanned Transfer Cost
Davie Inc.	Lévis QC	25 805.52 \$
Oceans Industries Inc.	Île-aux-Coudres, QC	23 290.14 \$
Chantier Forillon	Gaspé, QC	0 \$
Irving Shipbuilding Inc. (Halifax Shipyard)	Halifax NS	29 259.21 \$
Shelburne Ship Repair yard	Shelburne ,NS	33 129.02 \$
NewDock- St-John's Dockyard Ltd.	St. John's NF	41 052.19 \$
Heddle Marine Service Inc.	Hamilton, ON	50 777.18 \$
Méridien Maritime	Matane, QC	9 220.10 \$
Verreault Navigation Inc.	Les Méchins QC	8 107.53 \$

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Appendix 1 of Annex I

PRICE PER ITEM SHEET		
Item	Item	Item
1 & 2	General conditions	_____ \$
3	Dry docking and refloating	_____ \$
4	Service	_____ \$
5	Underwater hull inspection and paint	_____ \$
6	Anodes	_____ \$
7	Storm valves & Sea connections inspection	_____ \$
8	Isolating flanges	_____ \$
9	Rudders and bearings inspection	_____ \$
10	Anchor and chain inspection	_____ \$
11	Propeller shaft seals and shaft clearances	_____ \$
12	Removal and reinstallation of jettisonable tanks	_____ \$
13	Sewage sludge and black water tanks	_____ \$
14	Potable water tanks	_____ \$
15	Pressure test on F.O. Storage/overflow tank (#9)	_____ \$
16	Other work	_____ \$
A) KNOWN WORK – TOTAL FIRM PRICE		\$ _____

Remark to Bidders:

Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

Annex J

PRICING DATA SHEETS		
Item	Description	Firm Price
A) SCHEDULED WORK		
1 & 2	General Remarks (Scope, health and safety related requirements and general requirements) (Bidders can enter \$0.00 or indicate 'included' if the fees for this item are distributed in each of the items bellow. In case the fees are not distributed an amount must be indicated in the price box.)	
Firm price for item 1 (et 2)		\$
3	DRY DOCKING, BLOCKING AND REFLOATING (Excluding item below) Blocks relocation caused by Canada Price _____ \$ / block relocation X 5 relocations = _____ \$	
Firm price for item 3		\$
4	SERVICES	
4.1 General (Bidders can enter \$0.00 or indicate 'included' if the fees for this item are distributed in each of the items bellow. In case the fees are not distributed an amount must be indicated in the price box.)		\$
4.2 Docking (afloat) and mooring		\$
4.3 Mooring lines		\$
4.4 Gangways		\$
4.5 Electrical Power 600 V, 200 amps		_____ \$
Connect / Disconnect:		\$
Service (10 000 KW-hr) (Final amount prorated) Prix _____ \$ / KW-hr X 10 000 KW-hr = _____ \$		\$
4.6 Telephone lines, Internet and offices		_____ \$
Bureaux (2)		\$
4.6.1 Telephone lines	Connect / Disconnect:	\$
	Service:	\$
4.6.2 Internet	Connect / Disconnect:	\$
	Service:	\$
4.7 Fire Main Water Supply		\$
4.8 Cranage and man lift required for known work		\$
4.8 Cranage and man lift required for GCC daily activities (Final amount prorated) Cranage _____ \$ /Hr. X 10 Hours = _____ \$ Man lift _____ \$ /Hr. X 10 Hours = _____ \$		\$
4.9 Garbage removal		\$
4.10 Portable toilet		\$
4.11 Vessel Security (see Annex "F")		\$
4.12 Parking (3 spaces)		\$
Firm price for item 4		\$

PRICING DATA SHEETS		
Item	Description	Firm Price
5	Inspection and hull coating (Excluding sub items below) (Bidders can enter \$0.00 or indicate 'included' if the fees for this item are distributed in each of the items bellow. In case the fees are not distributed an amount must be indicated in the price box.)	\$
	5.3.1.1 & 5.3.1.2 Hull Cleaning	\$
	5.3.1.1 à 5.3.1.22 (Excluding items 5.3.1.11 & 5.3.1.16.1 below) Repair and coating of underwater hull (for an area of 200 m ² , excluding feathering and overlapping of adjacent paint). The Bidder must include feathering and overlapping in its price. (Final amount prorated)	
	Grit blasting SA2 ½ _____ \$ / m ² X 200 m ² : _____ \$	
	Welding repairs _____ \$ / m X 50 m : _____ \$	
	Coating _____ \$ / m ² X 200 m ² : _____ \$	
	Subtotal for the above =	\$
	5.3.1.11.1 Modification of Sea Chests and Grates	\$
	5.3.1.16.1 Shelter (optional)	\$
	5.3.2 Repair and coating of abovewater hull (for an area of 50 m ² , excluding feathering and overlapping of adjacent paint). The Bidder must include feathering and overlapping in its price. (Final amount prorated)	
Grit blasting SA2 ½ _____ \$ / m ² X 50 m ² : _____ \$		
Coating _____ \$ / m ² X 50 m ² : _____ \$		
Subtotal for the above =	\$	
5.3.3 (optional) Painting of draft marks	\$	
5.3.4 Grit blasting and coating of rudders	\$	
Firm price for item 5		\$
6	Anodes (Excluding items 6.3.1, 6.3.2, 6.3.3 & 6.3.4, below) (Bidders can enter \$0.00 or indicate 'included' if the fees for this item are distributed in each of the items bellow. In case the fees are not distributed an amount must be indicated in the price box.)	\$
	6.3.1 Hull anodes (Final amount prorated) Unit price _____ \$ / anode MME 28AB X 20 anodes : _____ \$	
	6.3.2 Sea chest and sea bay anodes (Final amount prorated) Unit price _____ \$ / anode MME 26AA X 3 anodes : _____ \$	
	6.3.3 Bow thruster tunnel anodes (Final amount prorated) Unit price _____ \$ / anode MME 26AA X 4 anodes : _____ \$	
	6.3.4 Bow thruster anodes (Final amount prorated) Unit price _____ \$ / TRAC_24 anode X 2 anodes : _____ \$	
	Subtotal for 6.3.1; 6.3.2; 6.3.3 & 6.3.4 =	\$

PRICING DATA SHEETS		
Item	Description	Firm Price
	Firm price for item 6	
7	Storm valves & sea connections inspection (Excluding items 7.2.1.1; 7.2.1.2; 7.2.1.3 & 7.2.1.4, below) (Bidders can enter \$0.00 or indicate 'included' if the fees for this item are distributed in each of the items bellow. In case the fees are not distributed an amount must be indicated in the price box.)	\$
	7.2.1.1 Sea water valves (Final amount prorated) Price _____ \$ / valve 250 mm X 4 valves = _____ \$ Price _____ \$ / valve 150 mm X 2 valves = _____ \$ Price _____ \$ / valve 100 mm X 3 valves = _____ \$ Price _____ \$ / valve 65 mm X 1 valves = _____ \$ Subtotal for 7.2.1.1 = _____ \$	\$
	7.2.1.2 Storm valves (Final amount prorated) Price _____ \$ / valve 50 mm X 4 valves = _____ \$ Subtotal for 7.2.1.2 = _____ \$	\$
	7.2.1.3 Overboard valves (Final amount prorated) Price _____ \$ / valve 150 mm X 2 valves = _____ \$ Price _____ \$ / valve 80 mm X 1 valve = _____ \$ Price _____ \$ / valve 65 mm X 1 valve = _____ \$ Price _____ \$ / valve 50 mm X 2 valves = _____ \$ Price _____ \$ / valve 40 mm X 2 valves = _____ \$ Price _____ \$ / valve 32 mm X 1 valve = _____ \$ Price _____ \$ / valve 25 mm X 1 valve = _____ \$ Subtotal for 7.2.1.3 = _____ \$	\$
	7.2.1.4 Blow down Air valves (Final amount prorated) Price _____ \$ / valve 25 mm X 3 valves = _____ \$ Price _____ \$ / valve 15 mm X 7 valves = _____ \$ Subtotal for 7.2.1.4 = _____ \$	\$
	Firm price for item 7	\$
8	Isolating flanges General fees for this item are distributed in each of the items bellow (Final amount prorated) Price _____ \$ / valve 250 mm X 2 valves = _____ \$ Price _____ \$ / valve 200 mm X 2 valves = _____ \$ Price _____ \$ / valve 150 mm X 2 valves = _____ \$ Price _____ \$ / valve 100 mm X 2 valves = _____ \$ Price _____ \$ / valve 65 mm X 2 valves = _____ \$ Price _____ \$ / valve 50 mm X 3 valves = _____ \$ Price _____ \$ / valve 40 mm X 2 valves = _____ \$ Price _____ \$ / valve 25 mm X 1 valve = _____ \$ Subtotal for item 8 = _____ \$	\$
	Firm price for item 8	\$

PRICING DATA SHEETS		
Item	Description	Firm Price
9	Rudders & bearings inspection	
	Firm price for item 9	\$
10	Anchors and chains inspection (Excluding sections of item 10.3.8.2 below)	\$
	10.3.8.2 Cleaning of chain locker (Final amount prorated)	
	High pressure cleaning (5 000 psi) = _____ \$	
	Disposal of water other than cleaning water* (Including decontamination fees)	
	Price per liters _____ \$ / liter X 100 liters= _____ \$	
	*The treatment of the cleaning water must be included to the cleaning price above.	
	Disposal of sludge (Including decontamination fees)	
	Price per Kg _____ \$ / Kg X 10 Kg= _____ \$	
	Subtotal for these sections of item 10.3.8.2 = _____ \$	
	Firm price for item 10	\$
11	Propeller shaft seals and Shaft clearances removal and reinstallation options (Excluding section of work of items 11.1.2 & 11.3.9, below)	\$
	11.3.5 Fees for Simplex Americas LLC representative	\$
	11.3.9 Fees for representative designated by Canada	\$
	Firm price for item 11	\$
12	Removal and reinstallation of Jettisonable Tanks	
	Firm price for item 12	\$
13	Sewage sludge and black water tanks (Excluding sections of work for items below)	\$
	High pressure cleaning (5 000 psi)	
	Price for dirty oil & sludge tank (#15) = _____ \$	
	Price for sewage sludge tank (#6) = _____ \$	
	Price for black water tank (#7) = _____ \$	
	Disposal of mud and waste water as well as cleaning water*. (Final amount prorated, including decontamination fees)	
	Mud – Price per liter _____ \$ / liter X 50 liters= _____ \$	
	Waste water – Price per liter _____ \$ / liter X 150 liters= _____ \$	
	*The treatment of the cleaning water must be included to the cleaning price.	
	Coating repairs (surface preparation and painting) of 10 distinct areas of 0,2m x 0,2m. (Final amount prorated)	
	Price per area _____ \$ / zone X 10 areas : _____ \$	
	Subtotal for the above = _____ \$	
	Firm price for item 13	\$

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PRICING DATA SHEETS		
Item	Description	Firm Price
14	Potable Water Tanks (Excluding sections of work for items below)	\$
	High pressure cleaning (5 000 psi)	
	Price for port water tank = _____ \$ Price for starboard water tank = _____ \$	
	Disposal of mud and waste water as well as cleaning water*. (Final amount prorated) (Including decontamination fees)	
	Price per liter _____ \$ / liter X 100 liters = _____ \$	
	*The treatment of the cleaning water must be included to the cleaning price above.	
	Coating repairs (surface preparation and painting) of 10 random areas of 0,2m ² . (Final amount prorated)	
	Price per area _____ \$ / zone X 10 areas : _____ \$ Subtotal for above = _____ \$	
	Firm price for item 14	\$
15	Pressure test on F.O. Storage/Overflow tank #9 (Excluding sections of work for item 15.3.2, below)	\$
	15.3.2 Removal and disposal of residual fuel oil (Final amount prorated) (Including decontamination fees)	
	Price per liter _____ \$ / liter X 100 liters = _____ \$	\$
	Firm price for item 15	\$
16	Other work	
	16.1 Replacement of transducer	
	Subtotal for 16.1 = _____ \$	\$
	Firm price for item 16	\$
A) KNOWN WORK -TOTAL FIRM PRICE		\$

CCGS A. Leblanc Dry-Docking 2016

Specification No: F3775-16IN640
Version 1

Date: September 8, 2016

Prepared by Marine Engineering
Canadian Coast Guard
Central & Arctic Region
Marine Engineering
Integrated Technical Services
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1 GENERAL NOTES

1.1 IDENTIFICATION

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

1.2 REFERENCES

1.2.1 List of acronyms

1.2.1.1 The following acronyms are used in this document:

Abbreviation	Definition
CA	Contract Authority (PWGSC)
CCG	Canadian Coast Guard
CLC	Canada Labour Code
CSM	Contractor Supplied Material
CSA	Canadian Standards Association
FSM	Fleet Safety Manual (CCG)
FSR	Field Service Representative
GSM	Government Supplied Materials
HC	Health Canada
IEEE	Institute of Electrical and Electronic Engineers
Kg	Kilogram
LOA	Length Over All
M	Meter
MSDS	Material Safety Data Sheet
OHS	Occupational Health and Safety
O/B	Overboard
P	Port
PWGSC	Public Works and Government Services Canada
SSMS	Safety & Security Management System
STBD	Starboard
TCMS	Transport Canada Marine Safety
TA	Technical Authority – Owner’s Representative (CCG)
WCB	Worker’s Compensation Board
WHMIS	Workplace Hazardous Material Information System
DFT	Dry Film Thickness

1.2.2 Document Priority Order

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

1.2.3 Drawings, documentation and applicable regulations:

FSM Procedures	Title	
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	
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”	
Publications		
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	
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	
DRAWINGS		
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	
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	

1.3 OCCUPATIONAL HEALTH AND SAFETY

1.3.1 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.

1.3.2 The Contractor and Contractor's employees will 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.

1.4 ACCESS TO WORKSITE

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

1.5 WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHIMS)

1.5.1 The Contractor must provide the TA with Material Safety Data Sheets (MSDS) for all Contractor supplied WHIMS controlled products.

1.5.2 The TA will provide the Contractor with access to MSDS for all controlled products on the ship for all specified work items.

1.6 SMOKING IN THE WORK SPACE

1.6.1 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.

1.7 CLEAN AND HAZARD FREE WORKSITE

- 1.7.1 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.
- 1.7.2 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.
- 1.7.3 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.
- 1.7.4 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.
- 1.7.5 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.

1.8 FIRE PROTECTION

- 1.8.1 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 end of the contract.

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- 1.8.2 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.
- 1.8.3 The Contractor must ensure protection against fire at all times including when working on the ship's fire detection and / or suppression system(s).
- 1.8.4 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.

1.9 TOUCH-UP / DISTURBED PAINT

- 1.9.1 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)

1.10 REGULATORY INSPECTIONS AND/OR CLASS SURVEYS

- 1.10.1 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.
- 1.10.2 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.
- 1.10.3 The Contractor must not substitute inspection by the TA for the required regulatory inspections or class surveys.
- 1.10.4 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.

I.11 DOCUMENTATION

- 1.11.1 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..
- 1.11.2 Recorded dimensions must be to a precision of three decimal places (unless otherwise stated) in the measuring system currently in use on the vessel.
- 1.11.3 The Contractor must provide to the TA current and valid calibration certificates for all instrumentation used during specified tests and trials.

I.12 CONTRACTOR SUPPLIED MATERIALS AND TOOLS

- 1.12.1 The Contractor must ensure all materials are new and unused.
- 1.12.2 The Contractor must ensure replacement material such as jointing, packing, insulation, small hardware, oils, lubricants, cleaning solvents, preservatives, paints, coatings etc. are in accordance with the equipment manufacturer's drawings, manuals and/or instructions.
- 1.12.3 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.
- 1.12.4 The Contractor must provide all equipment, devices, tools and machinery such as crantage, staging, scaffolding and rigging necessary for the completion of the work in this specification.
- 1.12.5 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.

1.13 GOVERNMENT SUPPLIED MATERIALS & TOOLS

- 1.13.1 All tools are Contractor supplied unless otherwise stated in the technical specifications.
- 1.13.2 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.
- 1.13.3 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.

1.14 RESTRICTED AREAS

- 1.14.1 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.
- 1.14.2 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.

1.15 CONTRACTOR INSPECTIONS AND PROTECTION OF EQUIPMENT AND THE WORKSITE

- 1.15.1 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.
- 1.15.2 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.

1.15.3 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.

1.15.4 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.

1.16 RECORDING OF WORK IN PROGRESS

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

1.17 LEAD PAINT AND PAINT COATINGS

1.17.1 The Contractor must not use lead based paints.

1.17.2 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.

1.17.3 The Contractor must provide HC product approval for underwater hull surface paints controlled by HC and the Pest Management Regulatory Agency.

1.18 ASBESTOS CONTAINING MATERIALS

1.18.1 The Contractor must not use any asbestos containing materials.

1.18.2 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.

1.19 REMOVED MATERIALS AND EQUIPMENT

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

1.20 WELDING CERTIFICATION

1.20.1 All welding and weld inspection must be in accordance with Lloyd's Registers and CCG Welding Specification CT-043-EQ-EG-001.

1.20.2 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.

1.20.3 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.

1.20.4 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.

1.20.5 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.

1.20.6 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.

1.20.7 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.

1.21 ELECTRICAL INSTALLATIONS

1.21.1 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.

2 VESSEL PARTICULARS

Name: CCGS A. Leblanc
Type: Twin Screw, Mid Shore Patrol Vessel
Class: Near Coastal Class I
Year Built: 2014

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

3 DRY-DOCKING

3.1 IDENTIFICATION

- 3.1.1 The Contractor must supply all labour, materials and facilities required for the berthing, mooring, dry-docking and storage of the vessel.
- 3.1.2 The Contractor must prepare dry-docking blocks and necessary shoring to maintain the true alignment of the vessel's hull and machinery throughout the docking period.
- 3.1.3 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 for making 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 enough room between the block, the speed log and the echo sounder.
- 3.1.4 The Contractor must record which block setup is used for docking the vessel, as stated in section 1.11.
- 3.1.5 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.
- 3.1.6 The Contractor must supply and erect at least two vessel access-ways in compliance with WCB regulations for the duration of the docking period. The Contractor must be responsible for the safe maintenance of the access-ways.
- 3.1.7 The Contractor must advise the Technical Authority 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 Technical Authority prior to close of contract.

3.2 REFERENCE MANUAL

- 3.2.1 CCGS A. LeBlanc Stability Book
- 3.2.2 Ship Safety's Bulletin No.: 06/1989

3.3 DELIVERABLES

3.3.1 The Contractor must provide the following information to the TA prior to the close of the contract:

3.3.1.1 Kilowatt hour meter readings at connection and at disconnection

3.3.1.2 Oil Disposal Certificate

3.4 LEAVING THE DRY DOCK

3.4.1 Before floating the vessel, the Contractor must install all docking plugs removed in items 9.3, 13.3 and 15.3 and replace all gaskets and joints by new ones. Water tightness of the plugs must be vacuum tested in the presence of Lloyd's surveyor and the TA.

3.4.2 Once the docking plugs have been installed and tested, the Contractor must fill up all the tanks that were emptied at the same level as they were when the ship was docked.

3.4.3 Before floating 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.

4 SERVICE

4.1 GENERAL

- 4.1.1 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.
- 4.1.2 Each of the services noted below must be separately priced in the Contractor's submitted bid.
- 4.1.3 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.
- 4.1.4 All staging, manlifts, craneage, screens, lighting and any other support services, equipment and materials necessary to carry out the work identified in these specifications must be Contractor supplied.
- 4.1.5 All deficiencies resulting from work carried out in this specification must be repaired at contractor's expense.
- 4.1.6 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.
- 4.1.7 The Contractor must report by email all deficiencies as they are identified, to the TA and make recommendations for their prompt remedial action.

4.2 BERTHING AND MOORING

- 4.2.1 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.
- 4.2.2 The length of the dock must be a minimum of 90% of the length of the vessel (LOA).

4.2.3 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.

4.2.4 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.

4.3 MOORING LINES

4.3.1 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.

4.4 GANGWAYS

4.4.1 Contractor must supply the labour and services required for the installation and removal of one gangway, complete with handrails, safety nets and lighting for the duration of the contract while the vessel is moored.

4.4.2 Any movement of the gangway required by the Contractor will be at the expense of the Contractor.

4.5 ELECTRICAL POWER

4.5.1 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.

4.5.2 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.

4.5.3 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.

- 4.5.4 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.
- 4.5.5 The Contractor must quote for a total consumption estimated at 10,000 kw-hr.
- 4.5.6 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 will be adjusted upwards or downwards on a PWGSC-TPSGC 1379

4.6 TELEPHONE LINES AND HIGH SPEED INTERNET

- 4.6.1 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.
- 4.6.2 The contractor must supply one (1) high speed Internet line accessible from the Chief Engineer's office and from two (2) offices with two (2) separate telephone lines and receivers for the Coast Guard and Public Works and Government Services Canada (PWGSC) representatives.
- 4.6.3 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.
- 4.6.4 All telephone and Internet lines shall 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.

4.7 FIRE MAIN CHARGING SERVICE

- 4.7.1 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.
- 4.7.2 The contractor must supply an auxiliary fire protection during work on firemain.
- 4.7.3 The Contractor must quote for one cubic meter of non-potable water consumption.
- 4.7.4 The Contractor must supply, at his own cost, the fresh water used in items # 13 (Sewage sludge and black water tanks) and 14 (Potable water tanks).

4.8 CRANAGE AND MANLIFT SERVICES

- 4.8.1 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 will 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.

4.9 GARBAGE REMOVAL

- 4.9.1 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.

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

4.10 PORTABLE TOILET

4.10.1 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.

4.11 VESSEL SECURITY

4.11.1 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.

4.11.2 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.

4.11.3 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.

4.11.4 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.

4.12 PARKING AT CONTRACTOR'S FACILITY

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

5 UNDERWATER HULL INSPECTION AND HULL PAINTING

5.1 IDENTIFICATION

- 5.1.1 The Contractor must make arrangements for Lloyd's Class inspection of the underwater hull area shell plating, including the Bow Thruster tunnel and the areas where the jettison gasoline tanks were removed, and paint system condition.
- 5.1.2 The underwater hull survey inspection must be carried out accordance with the Classification Society's survey requirements for a type of this vessel.
- 5.1.3 The underwater Hull Inspection must identify areas of the hull that need to be grit blasted and recoated to the paint manufacturer's requirements. This inspection must be completed within 48 hours of docking the vessel.
- 5.1.4 The contractor must do all the repairs required by Lloyd's Registers classification society. This work will be negotiated using form PWGSC 1379, as applicable.
- 5.1.5 The Contractor must clean, prepare and paint the hull above the waterline.
- 5.1.6 In order to validate the conformity of the paint application with the manufacturer's specification, a manufacturer's Field Service Representative must be present for the required items: 5.3.1.20, 5.4.2.2 and 5.5.1.3.

5.2 REFERENCES

- 5.2.1 Product Data
- 5.2.1.1 Interspeed 640, Intershield 300, Intergard 263, Interthane 990 Product Data and Application Sheets
- 5.2.2 Drawings

Drawing Number	Description
AF6101-10000-14	Docking Plan 1-2 and 2-2
AF6101-10000-01	Midship and Other Sections Plan
AF6101-10000-03	Shell Expansion
AF6101-10000-04	Watertight Bulkheads Plans
AF6101-50000-03	Valve Schedule
AF6101-63100-01	Paint Schedule
AF6101-63300-01	Scheme of Cathodic Protection
AF6101-89940-01_01	General Arrangement Plan 1-2

AF6101-89940-01_02	General Arrangement Plan 2-2
AF6101-89940-02	Tank Arrangement & Capacity Plan
AF6101-89940-03	Line Plan
AF6101-89940-08	Draft Marks and Load Line Marks Plan
AF6101-10000-11	AF Rudders Construction Plan_Sht1
AF6101-10000-11	AF Rudders Construction Plan_Sht2

5.2.3 Regulations

5.2.3.1 Canada Shipping Act, 2001 (2001, c. 26) Hull Inspection Regulations (C.R.C., c.1432)

5.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

5.2.4 Standard

5.2.4.1 Coating Manufacturer's Specifications

5.2.4.2 CCG/6016 CCG Fleet, Federal Identity Program Guide

5.3 TECHNICAL

5.3.1 General – Specifications to be applied for all hull works except for those specified in 5.3.2

5.3.1.1 Underwater Hull Area, including Bow Thruster tunnel and areas from removed gasoline tanks $\approx 340 \text{ m}^2$ ($\approx 3,660 \text{ ft}^2$)

5.3.1.2 The Contractor must hydro-blast the entire 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.

5.3.1.3 The Contractor must remove the grates from the three sea-chests and clean the sea chests.

5.3.1.4 Once clean, the Contractor must schedule the Lloyd's inspection of the underwater hull structure and condition for the earliest opportunity following vessel dry-docking but within the 48 hours of docking.

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- 5.3.1.5 The Contractor must supply all necessary staging and man lifts for the work of this specification, including inspection by Surveyors, TA.
- 5.3.1.6 During the vessel underwater hull inspection up to the deep load line all areas with poor coating adhesion or lack of coating must be recorded on a copy of the shell expansion plan by the Contractor and verified by the Technical Authority. These areas must be recoated as per Paint Manufacturer specification.
- 5.3.1.7 The Contractor must quote on 200 square meters of painting. Actual painting service must be prorated accordingly.
- 5.3.1.8 This inspection must also include the inside of the three seachests, the inside of the bow thruster tunnel and the areas surrounding the jettisonable gasoline tanks. See item 12.
- 5.3.1.9 The Contractor must carry out all Lloyd's surveyor prescribed repairs in accordance with all applicable standards and regulations including those identified in 1.20 (Welding certification).
- 5.3.1.10 The Contractor must quote on 50 meters of welding pass. Actual welding services must be prorated accordingly.
- 5.3.1.11 The Contractor must modify the Sea Chest and Grates according to the Lengkeek Vessel Engineering Inc. document J16003-R02, Rev A.
- 5.3.1.12 All materials used for the prescribed repairs must meet or exceed original specifications and must be in compliance with applicable regulations and standards.

- 5.3.1.13 The Contractor must schedule the Lloyd's inspection of all prescribed repairs following their completion and prior to the coating application.
- 5.3.1.14 All new and disturbed steel resulting from the prescribed repairs must be prepared and coated in accordance with Coating Manufacturer's Specification.
- 5.3.1.15 All surface preparation and recoating must be performed by a specialized crew in the application of marine exterior hull coatings for ships. The Contractor must prepare the surface of the underwater hull area in accordance with the coating manufacturer's requirements and as follows: The area to be recoated must be blasted to SSPC-SP10 (Sa2-½ Swedish Standard) with abrasive providing minimum amplitude of 80 microns. All necessary steps must be taken after blasting to minimize steel oxidation by applying the coating in accordance with the paint manufacturer's instructions. All edges to the existing coating must be feathered and blown clean with compressed air prior to the coating application. According to our record, coating on the underwater hull is one coat of Intersheid 300 @5 mils, one coat of Intergard 263@4 mils, one coat of Interspeed 640@4 mils.
- 5.3.1.16 Where ambient air temperatures are not within manufacturer's specification, the Contractor must take steps to ensure that the painting and curing of the underwater hull coating system will be done accordingly with the manufacturers specification and completed before the completion date of the contract.
- 5.3.1.16.1 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. No combustion gasses exhausted from the heaters are allowed in the shelter. The shelter must be dismantled only after the paint work is completed, and only after the recommended drying time is reached. The Contractor must quote for a shelter covering a hull section's length of 10 meters and for a shelter covering the entire length of the hull, on each side.
- 5.3.1.17 All existing coatings on all surfaces identified for recoating, must be completely removed, contained and disposed of in accordance with applicable territorial and federal environmental regulations.
- 5.3.1.18 All underwater areas, not requiring grit blasting, must be protected from damage and contamination during surface preparation and recoating. These areas include all ship side valves, port and starboard propellers, all rudder bearings and their cover, bow thruster blades, all anodes, speed log and all depth sounding appliances, etc.

- 5.3.1.19 All accommodation area, scuttles, port holes, windows, deck machinery, susceptible to damage from surface preparation and coating application overspray must be protected accordingly.
- 5.3.1.20 The Contractor must be responsible for the cleanup of all blasting grit, debris and overspray from the vessel's interior and exterior decks.
- 5.3.1.21 The Contractor must ensure that all coatings are applied within the allotted dry dock time period in order to allow for the full and proper curing of the coating to the vessel's hull prior to immersion. Any application that results in an unacceptable coating to the FSR and TA must be redone (blasting included) at the Contractor's expense.
- 5.3.1.22 The Contractor must have the attending Lloyd's surveyor inspect the shell plating. A survey credit must be obtained from Lloyd's for the inspection and certification of the shell plating. The Contractor must present this survey credit to the Technical Authority prior to the flooding of the dock to re-float the vessel. The Contractor must notify the Technical Authority so that it may witness the shell plating inspection by the Lloyd's Surveyor.
- 5.3.2 General –Specifications to be applied solely for hull works above the water line
- 5.3.2.1 Underwater Hull Area, including Bow Thruster tunnel and areas from removed gasoline tanks $\approx 165 \text{ m}^2$ ($\approx 1780 \text{ ft}^2$)
- 5.3.2.2 During the vessel above waterline hull inspection all areas with poor coating adhesion or lack of coating must be recorded on a copy of the shell expansion plan by the Contractor and verified by the Technical Authority.
- 5.3.2.3 All damaged painted areas identified by the TA must be dealt as follows:
- 5.3.2.3.1 The Contractor must prepare the surface of the underwater hull area in accordance with the coating manufacturer's requirements and as follows: The area to be recoated must be blasted to SSPC-SP10 (Sa2-1/2 Swedish Standard) with abrasive providing minimum amplitude of 80 microns.
- 5.3.2.3.2 All necessary steps must be taken after blasting to minimize steel oxidation by applying the coating in accordance with the paint manufacturer's instructions.
- 5.3.2.3.3 All edges to the existing coating must be feathered and blown clean with compressed air prior to the coating application. The required dry film thickness for the coatings are: Intershield 300 @5 mils and Intergard 263@3 mils.

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- 5.3.2.4 The Contractor must quote on 50 square meters of painting. Actual painting service must be prorated accordingly.
- 5.3.2.5 After completion of the previous work, the Contractor must paint the entire hull surface above the waterline in conformance with the measurements and color coding specified in the CCG Fleet “Federal identity program guide”, Annex I, pages 71 to 74.
- 5.3.2.5.1 Surface preparation must conform to SSPC-SP10 standard.
- 5.3.2.5.2 The coating used must be Interthane 990 with a dry film thickness of 2 mils.
- 5.3.2.5.3 The colors of the Interthane 990 coatings must be CCG Red 3000 for most of the hull, White RAL 9003 and Black RAL 9004 for the white bands and the lettering.
- 5.3.2.6 All surface preparation and recoating must be performed by a specialized crew in the application of marine exterior hull coatings for ships.
- 5.3.2.7 The Contractor must submit to the AT, for approbation, the completed paint work on the hull above the waterline.
- 5.3.3 Draft Markings
- 5.3.3.1 The Contractor must have the attending Lloyd’s surveyor and the AT inspect the draft markings on the vessel in conformity with drawing no.: AF6101-89940-08.
- 5.3.3.2 Optional item: The Contractor must quote a specific price for this item because it will be executed only if the inspection by the Lloyd’s Surveyor and the TA requires the work to be performed.
- 5.3.3.2.1 The Contractor must renew the following draft markings on the vessel by grit blasting clean each draft mark to the bare steel and re-punch the outline of the draft mark if required. The renewed marks coatings must comply with the On-board Maintenance Plan for Hero Class Vesels, Rev. 1. The renewal of these marks must be done after the final painting and curing of the underwater hull coating.
- 5.3.3.2.2 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.
- 5.3.3.2.3 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.
- 5.3.3.2.4 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 marking and vessel and are acceptable to the attending Lloyd’s Surveyor.
- 5.3.3.2.5 The Contractor must renew the Port and Starboard Plimsoll markings at mid-ship including all load lines and mid-ship markings via the same procedure as outlined above for the draft marks.

5.3.4 Rudder

5.3.4.1 The Contractor must prepare the surface of the two rudders in accordance with the coating manufacturer's requirements and as follows: The area to be recoated must be blasted to SSPC-SP10 (Sa2-1/2 Swedish Standard) with abrasive providing 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 apply one coat of Intergard 263 @5 mils and one coat of Interspeed 640@4 mils.

5.4 PROOF OF PERFORMANCE

5.4.1 The Contractor must afford the TA the opportunity to witness the Lloyd's inspection of the underwater hull prior to and following all prescribed repairs.

5.4.2 Testing/Trials

5.4.2.1 The Contractor must perform nondestructive testing as requested by the attending Lloyd's Surveyor on 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 will be negotiated using PWGSC 1379 form.

5.4.2.2 The Contractor must give the price for one x-ray weld inspection and the price for one die penetrant inspection performed by a certified technician of a Level 2 Nondestructive testing.

5.4.2.3 The Contractor must perform and record Wet Film Thickness readings during each application of underwater surface area as required by the FSR. The readings and their locations must be contained in the final report.

5.4.3 Certification

5.4.3.1 Before the end of the contract, certification or other documentation must be submitted to the TA attesting to the quality of new materials and components such as shell plating, structural members and welding rods.

5.5 DELIVERABLES

5.5.1 Documentation (Reports/Drawings/Manuals)

5.5.1.1 Following the Lloyd's underwater hull inspection and prior to carrying out the prescribed repairs, 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.

5.5.1.2 The Contractor must provide a coating application report from the FSR to the TA that details all of the particulars 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 Before the end of the contract, a comprehensive report covering all completed work must be submitted to the TA in accordance with 1.11.

5.5.1.3 Prior to the close of contract, a comprehensive report covering all completed work must be submitted to the TA in accordance with 1.11.

6 ANODES

6.1 IDENTIFICATION

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

6.2 REFERENCES

6.2.1 Manual:

NO.	Description
1	Hydraulic Thruster Installation and Operation
2	Liste des anodes/ Anode list

6.2.2 Drawings:

Drawing Number	Drawing Title
AF6094-63300-01	Scheme of Cathodic Protection Diagram
AF6101-63300-01	Scheme of Cathodic Protection
AF6094-25600-02	Sea Chest Arrangement

6.2.3 Regulations

6.2.3.1 Canada Shipping Act, 2001 (2001, c. 26) Hull Inspection Regulations (C.R.C., c.1432)

6.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

6.2.4 Standard

6.2.4.1 N/A

6.3 TECHNICAL

6.3.1 Hull anodes

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- 6.3.1.1 The Contractor must replace all sacrificial hull anodes, numbering 20.
- 6.3.1.2 Replacement hull anodes, type MM 28AB, will be provided by Canada.
- 6.3.1.3 The Contractor must fit new anodes in the same locations as the removed anodes.
- 6.3.1.4 The Contractor must replace the anodes after the hull coating is applied.
- 6.3.2 Sea Chest and Sea Bay Anodes
- 6.3.2.1 The Contractor must replace three anodes, one in each of three sea chest.
- 6.3.2.2 Replacement anodes, type MM 26AA, will be provided by Canada.
- 6.3.2.3 The Contractor must clean to the metal all remaining welds after the anodes removal.
- 6.3.2.4 If the replacement anodes are fitted before the new coating is applied in the sea chest and sea bay areas, The Contractor must protect the welded anodes from the coating material to be applied during the work execution of paint process
- 6.3.2.5 The Contractor must remove anode protections after the completion of the coating application.
- 6.3.3 Bow thruster Tunnel
- 6.3.3.1 The Contractor must replace all four Bow Thruster tunnel anodes, two on each side of the propeller.
- 6.3.3.2 Replacement anodes, type MM 26AA, will be provided by Canada.
- 6.3.3.3 The Contractor must clean to the metal all remaining welds after the anodes removal.
- 6.3.3.4 If the replacement anodes are fitted before the new coating is applied in the Bow Thruster tunnel, The Contractor must protect the welded anodes from the coating material to be applied during the work execution of paint process
- 6.3.3.5 All anode protection must be removed after completion of the coating application.
- 6.3.4 Bow thruster Anodes
- 6.3.4.1 The Contractor must replace the two cone shaped anodes, one on each side of the propeller.

6.3.4.2 Replacement anodes (Type TRAC 24) will be provided by Canada.

6.3.4.3 The cone shaped anodes must be installed according to No.: 29351 24 TRAC ASSY.

6.4 PROOF OF PERFORMANCE

6.4.1 Inspection

6.4.1.1 The Contractor must afford the TA the opportunity to witness the Lloyd's inspection of the anodes prior to, and following all prescribed renewing.

6.4.2 Tests & Trials

6.4.2.1 The Contractor must notify the Inspection Authority upon completion of this work item to afford the Authority the opportunity to verify the work has been completed as detailed in this Section. Verification of this work must be performed before the ship undocking.

6.4.3 Certification

6.4.3.1 Before the end of the contract, certification or other documentation must be submitted to the TA attesting to the quality of new materials and components.

6.5 DELIVERABLES

6.5.1 Documentation (Reports/Drawings/Manuals)

6.5.1.1 Prior to the close of contract, a comprehensive report covering all work and replacements must be submitted to the TA in accordance with 1.11.

7 STORM VALVES & SEA CONNECTIONS INSPECTION

7.1 IDENTIFICATION

7.1.1 The Contractor must remove, disassemble, clean and layout for Lloyd's inspection all storm valves and sea connections.

7.2 REFERENCES

7.2.1 Equipment Data

7.2.1.1 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

7.2.1.2 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
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7.2.1.3 List of Overboard Valves: (Total 10)

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	Bilge O/B	Engine Room	50
V520056	Bilge Eductor O/B	Engine Room	80
V593071	O/B Discharge		32

7.2.1.4 List of Blow down Air Valves (Total 10)

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
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7.2.1.5 Drawings

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

7.2.2 Regulations

7.2.2.1 Canada Shipping Act 2001, Hull Inspection Regulations (C.R.C., c. 1432)

7.2.2.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

7.3 TECHNICAL

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

7.3.2 The Contractor must ensure, prior to the start of disassembly, that all precautions are 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.

7.3.3 The Contractor must visually inspect all removed valves and report by email all deficiencies as they are identified, to the TA and make recommendations for their repair or replacement.

7.3.4 The Contractor must remove, disassemble, clean and layout for Lloyd's inspection all sea connections listed above.

7.3.5 Prior to reassembly and installation, the Contractor must arrange the attending Lloyd's Surveyor and the TA the opportunity to visually inspect all valves as listed above.

7.3.6 Following inspection, all original valves must be re-seated and reassembled using new CSM packing and gaskets.

7.3.7 All flange gaskets disturbed as a result of the valve servicing process must be renewed using new CSM gasket material.

7.4 PROOF OF PERFORMANCE

7.4.1 Inspections

7.4.1.1 Following all valves servicing and prior to installation, the Contractor must demonstrate to the attending Lloyd's Surveyor and the TA the opportunity to inspect all valves as listed above.

7.4.2 Testing/Trials

7.4.2.1 Following the completion of all valve work, the Contractor must test all valves as listed above for sealing integrity at their respective maximum system operating pressures. All leaks must be repaired at the Contractor's expense prior to the closing of contract.

7.4.2.2 The Contractor must arrange the attending Lloyd's Surveyor and the TA the opportunity to witness the successful testing of all valves as listed above.

7.4.3 Certification

7.4.3.1 Before the end of the contract, certification or other documentation must be submitted to the TA attesting to the quality of new materials and components such as packing, gaskets and valves.

7.5 DELIVERABLES

7.5.1 Documentation (Reports/Drawings/Manuals)

7.5.1.1 Before the end of the contract, a comprehensive report covering all work and replacements must be submitted to the TA in accordance with 1.11.

8 ISOLATING FLANGES

8.1 IDENTIFICATION

8.1.1 The following valves must be inspected and fitted with a new galvanic protection system in order to isolate the hull valves from the piping. Canada will provide the gaskets between flanges and the gasket that surround the bolts.

8.2 REFERENCES

8.2.1 List of valves

Identification number	Description	Location	Size (mm)
V256007	Port Sea Chest Circulation Valve	Engine Room FWD	100
V256008	Stbd Sea Chest 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
V256045	Port Auxiliary generator exhaust	Steering Gear Compt	50
V256047	Stbd Auxiliary generator exhaust	Steering Gear Compt	50
V256049	Stbd Main Engine exhaust	Steering Gear Compt	65
V256018	Port Main Engine supply	Engine Room	200
V256022	Stbd Main Engine Supply	Engine Room	200
V256032	Port O/B Discharge	Engine Room	150
V256035	Stbd 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	Bilge O/B	Engine Room	50

8.2.2 Informative document

Drake Specialties	Flange Isolation Kits
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8.3 TECHNICAL

8.3.1 The Contractor must insert the galvanic isolation gasket on each side of the valves mentioned in section 8.2.1 and the bolts must be installed with the supplied material.

8.4 PROOF OF PERFORMANCE

8.4.1 The contractor must test the each flange connection with a isolation tester and the results must be noted in the dry-dock report section 1.11. Type tinker Rasor RF-IT)

9 RUDDERS & BEARINGS INSPECTION

9.1 IDENTIFICATION

9.1.1 Both rudders, rudder stocks and rudder bearings must be prepared for Lloyd's inspection.

9.2 REFERENCES

9.2.1 Manual

NO.	Description
1	Jastram Steering System Installation and Service Manual

9.2.2 Drawings

Drawing Number	Description	
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	

9.2.3 Regulations

9.2.3.1 Canada Shipping Act, 2001: Marine Machinery Regulations (SOR/90-264)

9.2.3.2 Lloyd's Register, Rules & Regulations for the Classification of Special Service Craft

9.2.3.3 CAN/ONGC-48.9712

9.2.4 Standard

9.2.4.1 N/A

9.3 TECHNICAL

- 9.3.1 The Contractor must ensure that the vessel is docked such that a minimum height of 1.3 meters is maintained between the keel of the vessel and the dry dock.
- 9.3.2 The Contractor must ensure all applicable safety precautions including equipment lock outs and tag outs are implemented prior to the start of work. 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 fitted distance must be recorded prior to disconnection such that these distances can be re-established upon re-assembly.
- 9.3.3 The Contractor must ensure, prior to the start of disassembly, precautions are taken to ensure the reassembly and reinstallation of all system and equipment components are as per original and in accordance with manufacturer's specifications.
- 9.3.4 The Contractor must report by email all deficiencies as they are identified, to the TA and make recommendations for their prompt remedial action.
- 9.3.5 All rudder bearing clearances must be measured and recorded prior to removal of rudder stocks.
- 9.3.6 The two rudders and rudder stock assemblies must be disconnected, removed and laid out for Lloyd's inspection.
- 9.3.7 The two rudders must be visually inspected and also pressure tested for defects and the findings recorded. On each rudder, the Contractor must remove the docking plug and must perform a pressure test of not more than 3 psi for 1 hour witnessed by Lloyd's Surveyor and the TA. Recommendations for repairs must be made accordingly.
- 9.3.8 The rudder stocks must be visually inspected for defects, diameters measured and findings recorded. Recommendations for repairs must be made accordingly.
- 9.3.9 All rudder stock keyways must be inspected for defects using NDT LP Level II testing in full compliance with CAN/ONGC-48.9712. All findings must be recorded.
- 9.3.10 The top rudder bearings and bearing fasteners for both rudder stocks must be visually inspected for defects and findings recorded and submitted to the Lloyd's surveyor and the TA. If any unplanned work is required, it will be negotiated using from PWGSC 1379, as applicable.

- 9.3.11 The rudder carrier bearings for both rudder stocks must be visually inspected for defects and findings recorded and submitted to the Lloyd's surveyor and the TA. If any unplanned work is required, it will be negotiated using from PWGSC 1379, as applicable.
- 9.3.12 Following inspection, both rudder assemblies must be reassembled as per original and in accordance with manufacturer's specifications.
- 9.3.13 Before removing the Skegs docking plugs the Contractor must ensure all applicable safety precautions are taken to collect all residual liquid or other filling mixture inside in the Skegs.
- 9.3.14 The Contractor must remove the docking plugs from 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 witnessed by Lloyd's Surveyor and the TA.
- 9.3.15 After pressure testing of the skegs, the Contractor must fill both skegs with a water based corrosion preventative product and drain it afterward before installing the docking plugs.
- 9.3.16 The Contractor must re-install the rudders and reconnect all equipment and items removed during the removal of the rudders.
- 9.3.17 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 of adjusting correctly 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.
- 9.3.18 Care must be taken to ensure that all values recorded prior to disassembly are achieved during assembly and that all electrical connections and otherwise are re-established as recorded.
- 9.3.19 The Contractor must ensure that the tiller achieves a proper fit and that the tiller nut is hardened up in the presence of the Technical Authority.
- 9.3.20 Following the completion of all work, operational testing under full load must be conducted on all disturbed equipment and systems until such time as all identified deficiencies have been corrected and full system functionality has been established.

9.4 PROOF OF PERFORMANCE

9.4.1 Inspections

9.4.1.1 Following the completion of all cleaning, inspection and repairs, and prior to reassembly, the Contractor must afford the attending Lloyd's Surveyor and the TA the opportunity to inspect all disassembled components. The Contractor must set to work the rudder system, verifying that the rudder moves hard over to hard over and performs as the installation manual.

9.4.1.2 The Contractor must conduct a dock trial where both the rudders systems are tested for correct operation in the directions and to ensure that proper indication is received on all system gauges.

9.4.1.3 Upon successful completion of the dock trial, the Contractor must conduct a one (1) hour sea trial with 100% engine load to verify the normal operation of all systems.

9.4.1.4 If the sea trial cannot be completed as planned, due to any weather issue or seaway issue, the Contractor must wait for adequate weather conditions to do the sea trial and the Contractor must assume any extra cost caused by the delay,

9.4.2 Testing/Trials

9.4.2.1 Following initial testing and subsequent repairs, the Contractor must afford the attending Lloyd's Surveyor and the TA the opportunity to witness a comprehensive operational test under full load of all disturbed equipment and systems.

9.4.3 Certification

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

9.5 DELIVERABLES

9.5.1 Documentation (Reports/Drawings/Manuals)

9.5.1.1 A comprehensive report of all inspections including all findings, recommendations, test results and recorded measurements must be prepared in accordance with 1.11 and submitted to the TA prior to the close of contract.

10 ANCHOR AND CHAIN INSPECTION

10.1 IDENTIFICATION

10.1.1 The anchor and anchor chain must be laid out for Lloyd’s Surveyor inspection.

10.2 REFERENCE

10.2.1 Drawing

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

10.2.2 Regulation

10.2.2.1 Canada Shipping Act, 2001: Marine Machinery Regulations (SOR/90-264)

10.2.2.2 Lloyd’s Register, Rules & Regulations for the Classification of Special Service Craft

10.2.3 Standard

10.2.3.1 ISO 9712:2012, International Standards for Qualification and Certification of NDT Personnel

10.2.3.2 ANSI/ASNT CP-189-2011, ASNT Standard for Qualification and Certification of NDT Personnel

10.3 TECHNICAL

10.3.1 The Contractor must clean and lay out the anchors and chains for Lloyd’s Surveyor’s inspection.

10.3.2 The Contractor must arrange for the lowering and raising of the anchor, without hydraulic power available for operating the winch.

10.3.3 The Contractor must ensure 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 specification.

10.3.4 A thorough visual inspection of the anchor and chain for indications of excessive wear, wastage and other defects must be performed. All evidence of defects must be brought to the attention of the attending Lloyd’s Surveyor and TA.

10.3.5 Areas of concern must be assessed in accordance with in this specification, required repairs must be actioned prior to the close of contract as unscheduled work.

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- 10.3.6 The anchor eye and anchor shackles must be inspected using liquid penetrant testing performed by a NDT LPT Level II certified Technician
- 10.3.7 Following all repairs and replacements, the anchor chain must be marked with stainless steel wire at each joining shackle. Links s adjacent to the joining shackle must be prepped and painted white in accordance with paint manufacturer's recommendations. The number of painted links each side of the joining shackle must correspond with the order number of the adjacent anchor side shot.
- 10.3.8 The Contractor must arrange the chain locker for Lloyd's Surveyor inspection. The Contractor must establish the confine space entry procedure prior to start the inspection.
- 10.3.8.1 The contractor must open the chain locker. The chain locker must be vented and certified for entry. The certificate of entry must be valid for each entry.
- 10.3.8.2 The contractor must pressure wash the chain locker with a minimum of 5000 psi. The contractor must allow for 100 liters of liquid waste not including the cleaning media used and 10 Kg of sludge to dispose.
- 10.3.8.3 The Contractor must clean all the internal chain locker suction.
- 10.3.8.4 The contractor must schedule an inspection of the chain locker by the Lloyd's Surveyor and the TA in order to determine if any structural or paint works are required.
- 10.3.8.5 If any unplanned structural or paint works are required, they will be negotiated using from PWGSC 1379.
- 10.3.8.6 After the final approval of the chain locker by the Lloyd's surveyor and the TA, the Contractor must close the manhole cover with a new gasket and new nuts of the same grade as those removed.
- 10.3.9 Prior to undocking, the chain and anchor must be stowed as per original.
- 10.3.10 Any unplanned repair work required on the anchor or the chain will be negotiated using from PWGSC 1379

10.4 PROOF OF PERFORMANCE

10.4.1 Inspections

10.4.1.1 The Contractor must arrange the attending Lloyd's Surveyor and the TA the opportunity to visually inspect the ranged anchor and anchor chain.

10.4.2 Testing/Trials

10.4.2.1 The Contractor must afford the attending Lloyd's Surveyor and the TA the opportunity to witness the successful operation of anchor and anchor chain.

10.4.3 Certification

10.4.3.1 Prior to the close of contract, certification or other documentation must be submitted to the TA attesting to the quality of new materials and parts such as shackles, links and other components replaced on the anchor and anchor chain assembly.

10.5 DELIVERABLES

10.5.1 Documentation (Reports/Drawings/Manuals)

10.5.1.1 Before the end of the contract, a comprehensive report covering all work and replacements must be submitted to the TA in accordance with 1.11..

11 PROPELLER SHAFT SEALS AND SHAFT CLEARANCES

11.1 IDENTIFICATION

- 11.1.1 Port and Starboard shaft seals, must be opened up for Lloyd’s inspection
- 11.1.2 An FSR from Simplex Americas LLC must be present to dismantle the shaft seals, to perform all required measurements and to reassemble the shafts seals after the Lloyd’s surveyor’s approval. All cost related to the FSR services must be included in the specification quote.

11.2 REFERENCE

11.2.1 Manual

NO.	Description
1	Kamewa CP-A D Installation Manual (10Sooo239/49341-E)

11.2.2 Drawings

Drawing Number	Drawing Title
6094-24300-01	Shaft Line Arrangement Plan

11.2.3 Regulations

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

11.3 TECHNICAL

- 11.3.1 The Contractor must release the inboard side of the shaft seals Port and Stbd side, there are need to protect either sealing surfaces of the shaft seal as both sides. The Contractor must ensure that the sealing surfaces are protected as described in the Simplan Seal Manual.
- 11.3.2 Prior to start the work, the contractor must ensure all applicable safety precautions including equipment lock outs and tag outs are be implemented.
- 11.3.3 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 will be as per original and in accordance with manufacturer’s specification.

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- 11.3.4 The Contractor must take the clearance reading between shaft and FWD Sterntube Bearing, at four places, which are top, bottom, Port and Stbd position in front of the Lloyd's Surveyor and the TA.
- 11.3.5 The Contractor must open the Aft Sterntube Bearing covers from Port and Stbd side for taking the bearing clearance. The Contractor must take the clearance reading between shaft and Aft Sterntube Bearing, four place, which are top, bottom, Port and Stbd position in front of the Lloyd's Surveyor and the TA.
- 11.3.6 The Contractor must remove the Rope Guard with Net Cutters from Port and Stbd side for taking the bearing clearance. The Contractor must take the clearance reading between shaft and Aft Bracket Bearing, four place, which are top, bottom, Port and Stbd position in front of the Lloyd's Surveyor and the TA.
- 11.3.7 The Contractor must reinstall shaft seals, Port and Stbd, in accordance with the Simplan Manual and must be tensioned as per the manual.
- 11.3.8 The Contractor must reinstall the Aft Sterntube Bearing covers from Port and Stbd side and the contractor must lock the screws, to original position original lock style.
- 11.3.9 The Contractor must hire a Field service representative from the manufacturer designated by Canada to install the new Rope Guard model supplied by Canada.

11.4 PROOF OF PERFORMANCE

11.4.1 Inspection

- 11.4.1.1 Following the completion of taking the bearing clearances, and prior to reinstall, the Contractor must afford the attending surveyor and the TA the opportunity to inspect the condition and witness the taking of the bearing clearance and to witness the following tests and trials.

11.4.2 Test and Trials

- 11.4.2.1 The Contractor must notify the TA upon completion of this work item to afford the Authority the opportunity to verify the work has been completed as detail in this section. Verification of this work must be performed before the ship undocking.

11.4.2.2 The Contractor must complete all tests as required by the Simplex Americas LLC FSR and by Lloyd's Surveyor in order to validate the shaft seals' water tightness during a required dock trial where the ship's crew will operate the engines and rotate the propellers at a moderate speed, determined by the TA in agreement with the Contractor, with the objective of finding any water leak and overheating of the stern tubes and during the following sea trials.

11.4.2.3 The Contractor must complete a sea trial with 100% engine load for one hour to verify that all systems' operation follows the manufacturer's standards.

11.4.2.4 If there is a need to delay the trial, due to any weather issue or seaway issue for sea trial, the Contractor must wait for the weather to permit, to complete the sea trial. Any supplementary cost due to such a delay must be the Contractor's responsibility.

11.4.3 Certification

11.4.3.1 Before the end of the contract, certification or other documentation must be submitted to the TA attesting to the quality of new materials and components.

11.5 DELIVERABLES

11.5.1 Documentation (Reports/Drawings/Manual)

11.5.1.1 Before the end of the contract, a comprehensive report covering all measurements, work and replacements must be submitted to the TA accordance with 1.11.

12 REMOVAL AND REINSTALLATION OF JETTISONABLE TANKS

12.1 IDENTIFICATION

12.1.1 The two jettisonable tanks must be removed from their locations to allow painting of the surfaces now showing. The description below utilizes singular but applies to both tanks.

12.2 REFERENCE

12.2.1 Documents

Numéro	Description
IMG-20150325-00901	Picture of a jettisonable tank

12.2.2 Drawing

Drawing number	Description
AF6101-54900-01	RHIB Gasoline System
6094-54900-02	Gasoline Storage Tanks Principle of Construction
6094-O1101-5490-01	Gasoline Storage Tank Jettison System Installation
6094-O1111-5490-01	Gasoline Storage Tank Assembly & Details
6094-55100-02	Jettison Mechanism Pneumatic Control System

12.3 TECHNICAL

12.3.1 Before the work begins, the crew will remove any piping or accessories that are connected to the tanks and isolate all orifices of the tanks.

12.3.2 The Contractor must, for the duration of the work of removal and reinstallation of the tanks, hold the tanks to insure they will not fall accidentally outside of their location.

12.3.2.1 The Contractor must supply six (6) eyebolts with M16 threads, three (3) for each tank, in order to hold on firmly on the tanks when released.

12.3.3 The Contractor must remove the tie-downs and the deck panels that cover the tanks. The deck panels must be sandblasted and painted. See 12.3.8.

12.3.4 The Contractor must remove the tanks

12.3.5 Once the jettisonable tanks are removed, the Contractor must lay them on blocks and protect them so they don't get damaged from work done in the yard.

12.3.6 The Contractor must take apart all the Teflon rolling mechanisms and the watertight band to allow for inspection and paint planed in Item 5.

- 12.3.7 The Teflon rolling mechanisms and the watertight banks will be inspected by the TA who will decide if supplementary work must be done on these elements.
- 12.3.8 The Contractor must perform the following works on the two deck panels removed on 12.3.3:
- 12.3.8.1 The Contractor must transport the panels in a weather protected location.
 - 12.3.8.2 The Contractor must strip the panels to metal, removing all remaining paint, to SSPC-SP10 (Sa2-½ Swedish Standard). All edges to the existing coating must be feathered and blown clean with compressed air prior to the coating application
 - 12.3.8.3 The Contractor must take all necessary steps, after blasting, to minimize steel oxidation by applying the coating in accordance with the paint manufacturer's instructions.
 - 12.3.8.4 The Contractor must apply the following coatings:
 - 12.3.8.4.1 Intershield 300, 5 mils (DFT), Bronze colour
 - 12.3.8.4.2 Intershield 300, 5 mils (DFT), Aluminium colour
 - 12.3.8.4.3 Inerbond 201, 5 mils (DFT), Storm grey colour
- 12.3.9 When the paint work is completed, the contractor must:
- 12.3.9.1 The Contractor must reinstall the watertight bands and the rolling mechanism in their original locations.
 - 12.3.9.2 The Contractor must install the tanks in their original location.
 - 12.3.9.3 The Contractor must perform a jettison test of the tanks and put them back in their locations.
 - 12.3.9.4 The Contractor must put back the deck panels and the tie downs.

12.4 PROOF OF PERFORMANCE

- 12.4.1 The jettison test will be performed with the TA and the Lloyds Surveyor present.

12.4.2 Certifications

12.4.2.1 Before the end of the contract, the certificates and other documents proving the quality of new material and new components must be given to the TA.

12.5 DELIVERABLES

12.5.1 Documents (reports, drawings and manuals)

12.5.1.1 The Contractor must prepare a report including all the inspection, including the (constatations) and recommendation, the test results and the measurement taken, according to section 1.11 and give it to the TA before the end of the contract.

13 SEWAGE SLUDGE AND BLACK WATER TANKS

13.1 IDENTIFICATION

13.1.1 The sewage sludge and black water tanks must be cleaned, inspected and the tanks coating be touched up. Access to those tanks is from the Dirty Oil and sludge tank.

13.2 REFERENCE

13.2.1 Drawings

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

13.2.2 Manual and photos

Name	Description
	MSPV International Coatings Maintenance Plan OBM
Pdf A Leblanc Access to Dirty Oil tank	Picture of the manhole into the Dirty Oil Tank

13.3 TECHNICAL

13.3.1 Tank cleaning

13.3.1.1 The Contractor must stop and lock the ship's sanitary system.

13.3.1.2 The Contractor must remove the docking plug, drain the tank and dispose of the oil and sludge remaining in the Dirty Oil & Sludge tank (#15). The estimated amounts are 80 liters of liquid wastes and 20 liters of solid wastes for an estimated total of 100 liters.

13.3.1.3 The Contractor must open the manhole, pump dry, clean, ventilate the tank and certify it safe for entry and safe passage to the sewage sludge and black water tanks for the duration of the work inside.

13.3.1.3.1 The Contractor must remove the level gauge under the manhole and replace it with a new one, supplied by Canada.

- 13.3.1.4 The Contractor must remove the docking plug, drain the tank and dispose of the oil and sludge remaining in the Sewage Sludge tank (#6). The estimated amounts are 35 liters of liquid wastes and 15 liters of solid wastes for an estimated total of 50 liters.
- 13.3.1.5 The Contractor must open the manhole, 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.
- 13.3.1.6 The Contractor must remove the docking plug, drain the tank and dispose of the liquids and solids remaining in the black water tank (#7b). The estimated amounts are 35 liters of liquid wastes and 15 liters of solid wastes for an estimated total of 50 liters.
- 13.3.1.7 The Contractor must open the manhole giving access to the black water tank (#7b), pump dry, clean, ventilate the tank and certify it safe for entry for the duration of the work inside.
- 13.3.1.8 The contractor must clean the three tanks mentioned above with a pressure wash system of at least 5000 psi.
- 13.3.1.9 The three tanks must be inspected by the Lloyd's surveyor and the TA for structural damages and quality of the paint coating.
- 13.3.1.10 The Contractor must remove the suction pipe from all 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 if any defect is detected.
- 13.3.1.11 The contractor must install the three pipes with new Garlock style gaskets.
- 13.3.1.12 If required and after any required structural work, the Contractor must prepare the surfaces to be painted in compliance with the manufacturer's specification. The Contractor must quote for the preparation and painting of 10 specific areas of 0.2m by 0.2m total in the sewage sludge tank and the black water tank
- 13.3.1.13 The contractor must install the three docking plugs and must replace by new ones, all gaskets, nuts and washers from the three manholes opened. The nuts and washers must be of the same grade as those removed.

13.3.2 Paint touch-up

13.3.2.1 The Contractor must make sure that all required paint work follows the manufacturer's specification.

13.4 PROOF OF PERFORMANCE

13.4.1 The Contractor must advise the Lloyd's Surveyor and the TA when the tanks and their coatings are ready for inspection.

13.5 DELIVERABLES

13.5.1 The Contractor must submit to the TA a written report of temperature and humidity measurements and curing time for the paint application as required in section 1.11.

14 POTABLE WATER TANKS

14.1 IDENTIFICATION

- 14.1.1 The two fresh water tanks, port and starboard, must be cleaned, inspected and the tanks coating must be touched up.
- 14.1.2 The work must meet Health Canada Guidelines for Canadian Drinking water Quality.
- 14.1.3 The tanks are of a 3.214 cubic meter each.

14.2 REFERENCE

- 14.2.1 The existing liner is International Paint Interline 975P this product must be used for repairs.

14.2.2 Drawings

Drawing number	Description
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

14.2.3 Manual

Name	Description
	MSPV International Coatings Maintenance Plan OBM
7.A.12	Fleet Safety manual Section 7.A.12- Potable Water Quality
http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res_recom/index-eng.php	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

14.3 TECHNICAL

14.3.1 Preparation

- 14.3.1.1 The contractor must drain and open the water tanks. The tanks must be vented and certified safe for entry.
- 14.3.1.2 The tanks must be pressure washed and wiped clean. The contractor must allow for 100 Liters of liquid waste, not including the cleaning media used.
- 14.3.1.3 All the internal tank suction must be cleaned. The striking plate under the sounding tube must be inspected. The contractor must ensure that all vents, suction and filling lines are clear.
- 14.3.1.4 The contractor must utilize the services of the paint manufacturer's Representative (PMR to advise on the surface preparation and coating application as per the attached International Paint Q.C. document: Application Guidelines Potable Water Tanks, Interline 975P. Every precaution must be taken to ensure there is no solvent added, to avoid Ethylbenzene contamination.
- 14.3.1.5 The contractor must quote on preparation and repair of 2 m² total in 10 distinct areas, to be power tooled to SSPC-SP11, and the edges to be feathered as per the On board maintenance plan for hero class vessels specification. Note: "Area" includes feathering zone.
- 14.3.1.6 The contractor must use the product recommended by the Paint Manufacturer Representative and adhere exactly to the application procedures stated by the Paint Manufacturer Representative. The use of thinners is not acceptable; 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 Tank. Hoses must not be flushed with thinner and then reused for the potable water tank. The work schedule for tank coating must provide drying times consistent with the paint manufacturer's recommendations for fresh water tanks.
- 14.3.1.7 The tanks must be closed up after inspection by Lloyd's and the TA. New nitrile (or neoprene) gaskets must be used. The TA must witness the hardening up of all manholes, and closures.

14.4 PROOF OF PERFORMANCE

14.4.1 Inspection Points

14.4.1.1 Once all work has been completed and the tank is cleaned of all debris and work by-products, the contactor arrange for inspection and survey of the potable water tank by the TA.

14.4.2 Testing/Trials

14.4.2.1 The Potable Water tanks and the ship's fresh water system must be super-chlorinated in accordance with the procedures laid out in the Coast Guard Fleet Safety Manual procedure Potable Water Quality 7.A.12. On completion of super-chlorination the tanks must be drained and flushed twice before being returned to service. The contractor must be responsible to dispose of all water used to treat the fresh water tanks, allowing for 3.25 m³ per fill for each of the 2 tanks, including de-chlorination of the super-chlorinated water.

14.4.2.2 The contractor must arrange for testing of potable water tank and 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:

14.4.2.3 The tanks must be filled with fresh water, super-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.

14.4.2.4 The potable water distribution system must be super chlorinated 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.

14.4.2.5 The tank must be filled with potable water to approximately fifty percent of the working volume of the tank.

14.4.2.6 The tank must be allowed to remain stagnant for forty eight hours before samples are taken.

14.4.2.7 One (1) blank water sample must be collected from the freshwater supply line used to fill the tank.

14.4.2.8 Two water samples must be taken from the water inside the tank.

14.4.2.9 Samples from the distribution system must be taken in accordance with FSM.

14.4.2.10 The water samples listed above must be sent to an accredited laboratory for analysis.

The water samples must be tested using the 28 parameters described in the fleet safety manual paragraph 3.6F de la section 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.

14.4.3 Certification

14.4.3.1 The contractor must obtain water test reports from the laboratory.

14.5 DOCUMENTATION

14.5.1.1 The contractor must include all test reports in their final documentation. The contractor must provide evidence of acceptable tank water quality; prior to acceptance of the potable tank refit work by the CCG. The super chlorination and testing must be completed near the end of the work period

15 PRESSURE TEST ON F.O. STORAGE/OVERFLOW TANK (# 9)

15.1 IDENTIFICATION

15.1.1 The Contractor must proceed to a pressure test on the FO storage/overflow tank (# 9) in order to validate the integrity of a weld on the tank vent.

15.2 REFERENCE

15.2.1 Drawings

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

15.2.2 Regulations

N/A

15.3 TECHNICAL

15.3.1 The Contractor must isolate the FO Storage/Overflow tank from the other interconnected tanks.

15.3.2 The Contractor must remove the docking plug, drain the tank and dispose of the residual Fuel Oil, estimated at 100 liters.

15.3.3 The Contractor must clean and wipe dry the tank in order to produce a Gaz free certificate allowing for hot work in the tank for the required period.

15.3.4 The Contractor must plug the tank vent from the outside.

15.3.5 The Contractor must supply the required plugs to isolate the tank overflow into the day tank so other tanks are not pressurized.

15.3.6 The Contractor must disassemble the tank level gauge before the test and assemble it after the completion of the test.

- 15.3.7 The Contractor must carry out the pressure test in the tank and in its vent for a one hour period, with the compressed air feed disconnected. A calibrated pressure gauge must be connected to monitor the tank pressure at all time. The maximum test pressure must be of 3 psi.
- 15.3.8 If a leak is revealed during the pressure test and structural works are required, their cost will be negotiated using form PWGSC 1379. After the completion of the structural work, the tank must be inspected by the Lloyd's Surveyor and the TA.
- 15.3.9 Following the possible structural repairs, a second pressure test must be performed by the Contractor and any extra cost related to the test will be negotiated using the same PWGSC 1379 form used for the structural works in the tank.
- 15.3.10 The Contractor must replace all damaged gaskets or joints during the test related work with new gaskets and joints of Garlock type or equivalent. The Contractor must also replace the manhole gasket and nuts of similar grade as those removed.
- 15.3.11 The Contractor must record the room temperature during the pressure test, the duration of the test and the test pressure at the beginning and at the end of the test and any related remarks.

15.4 PROOF OF PERFORMANCE

- 15.4.1 The Contractor must perform the pressure test under the surveillance of the Lloyd's Surveyor and the TA.

15.5 DELIVERABLES

- 15.5.1 The Contractor must give to the TA a complete report of all recorded information logged during the pressure tests, as required by section 1.11.

16 OTHER WORK

16.1 TRANSDUCER

- 16.1.1 The Contractor must supply the parts and manpower to perform the following task on the transducer.
- 16.1.1.1 The contractor must remove and clean the extension section that is bolted between the hull and the transducer. (Pictures «Transducer 1/2/3.jpg» included in the specs.)
- 16.1.1.2 The contractor must submit the extension section to the AT who will decide to replace the sections or to reinstall the old ones in place. If the AT decides to replace the sections, the cost will be negotiated with the use a form PWGSC-1379.
- 16.1.1.3 The Contractor must replace the transducer, Simrad combi D, supplied by Canada, and assemble the extension plates, using new Stainless steel screws of the same caliber as those removed.
- 16.1.1.4 Dimensions of the transducer: L : 403 mm, w : 92 mm.
- 16.1.2 The Contractor must open the transducer's cofferdam, situated inside the vessel, under the deck of a longitudinal hallway, near frame 28, submit it to an inspection by the AT and close the cofferdam. The transducer must be securely mounted in place by means of a double nut arrangement.