

**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

<b>Title - Sujet</b> Winter Work - Sorel Fleet	
<b>Solicitation No. - N° de l'invitation</b> F3774-14N630/A	<b>Date</b> 2014-12-22
<b>Client Reference No. - N° de référence du client</b> F3774-14N630	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$QCL-036-16262
<b>File No. - N° de dossier</b> QCL-4-37240 (036)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-01-13</b>	
<b>Time Zone</b> <b>Fuseau horaire</b> Heure Normale du l'Est HNE	
<b>F.O.B. - F.A.B.</b> Specified Herein - Précisé dans les présentes <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Gagnon, Mathieu	<b>Buyer Id - Id de l'acheteur</b> qcl036
<b>Telephone No. - N° de téléphone</b> (418) 649-2883 ( )	<b>FAX No. - N° de FAX</b> (418) 648-2209
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> MINISTERE DES PECHES ET DES OCEANS NGCC FCG SMITH, LEIM, ST-OURS, KEAB 101, BOUL CHAMPLAIN QUEBEC Québec G1K7Y7 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

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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) The requirement is:
- a) to carry out the scope of work regarding the Canadian Coast Guard Ships (C.C.G.S.) CAPORAL KAEBLE, (C.C.G.S.) A. LEBLANC, (C.C.G.S.) ILE SAINT OURS, (C.C.G.S.) GARDE-COTE 03 AND (C.C.G.S.) FCG SMITH in accordance with the associated Technical Specifications detailed in the Requirement attached as Annex A.
  - b) to carry out any approved unscheduled work not covered in paragraph a) Above.
  - c) The requirement is exempt from the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), Annex 4 and the North American Free Trade Agreement (NAFTA), Chapter 10 Annex 1001.2b Paragraph 1, however, it is subject to the Agreement on Internal Trade (AIT).

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## **PART 2 - BIDDER INSTRUCTIONS**

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

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) 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 (2014-09-25) 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.

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

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

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## **2.5 Bidders' Conference (Not mandatory)**

A bidders' Conference chaired by the Contracting Authority will be convened on board vessel CCGS FCG Smith at 10:00 am, 6<sup>th</sup> January 2014. The vessel will be moored at Fisheries and Oceans Canada – Coast Guard Wharf, at 15, du Prince Street, Sorel-Tracy (QC) J3P 4J4.

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 site visit will be held immediately after the bidders' conference.

## **2.7 Work Period**

Work is to commence and be completed as follows:

Start of work: January 19<sup>th</sup>, 2015

End of work: April 15<sup>th</sup>, 2015

See also the respective working dates listed for each ship in Appendix A technical documents.

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.

## **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. 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 Goods and Services Tax or Harmonized Sales Tax is to be shown separately, if applicable.

#### **Section III: Certification Requirements**

Bidders must submit the certifications required under Part 5.

#### **3.1.2 SACC Manual Clause**

C0417T (2008-05-12) Unscheduled Work and Evaluation Price

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## PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

### 4.1 Evaluation Procedures

(a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical, 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". The total amount of Goods and Services Tax or Harmonized Sales Tax is to be shown separately, if applicable.

#### 4.1.2 Mandatory Criteria

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 & 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" <u>Pricing Data Sheets</u>	
3	Letter or proof of Insurance as per article 6. 13 of Part 6	

#### 4.1.4 Other informations 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
1	Proof of welding certification, as per clause 6.7 of Part 6;	Prior to contract award

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#### 4.1.5 Deliverables after Contract award

Élément	Description	Doit être fourni après l'attribution du Contrat, dans les
1	Work Schedule and Reports as per article 7.16, Part 7	5 calendar days
2	Insurance Requirements as per article 7.11, Part 7	5 calendar days
3	Inspections and tests plan as per article 7.28, Part 7	3 calendar days
4	Functional Fire detection or extinguishing systems certification	Prior to end of contract

#### 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.

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## **PART 5 - CERTIFICATIONS**

### **5.1 Generality**

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

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default, if any certification made by the Bidder is found to be untrue whether 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 with this request will also render the bid non-responsive or will constitute a default under the Contract.

### **5.2. Mandatory Certifications Required Precedent to Contract Award**

#### **5.2.1 Code of Conduct and Certifications - Related documentation**

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

#### **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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from [Human Resources and Skills Development Canada \(HRSDC\) - Labour's](#) website.

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

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

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

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

- 6.1 Security Requirement** *(Not used)*
- 6.2 Financial Requirements** *(Not used)*
- 6.3 Accommodation** *(Not used)*
- 6.4 Parking** *(Not used)*
- 6.5 Material and Supply Support** *(Not used)*
- 6.6 Workers' Compensation - Letter of Good Standing** *(Not used)*
- 6.7 Welding Certification**

At bids closing date the Bidder should submit evidence demonstrating its certification to the welding standards in accordance with the following:

Welding must 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 W47.1, Certification of Companies for Fusion Welding of Steel, section 2;
- (b) CSA W59, Welded steel construction (metal arc welding); and

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

- 6.8 Valid Labour Agreement** *(Not used)*
- 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** *(Not used)*
- 6.12 Environmental Protection** *(Not used)*
- 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".

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## PART 7 - RESULTING CONTRACT CLAUSES

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

### 1. Requirement

a) to carry out the docking, maintenance and alterations of the Canadian Coast Guard Ship (C.C.G.S.) CAPORAL KAEBLE, (C.C.G.S.) A. LEBLANC, (C.C.G.S.) ILE SAINT OURS, (C.C.G.S.) GARDE-COTE 03 AND (C.C.G.S.) FCG SMITH in accordance with the associated Technical Specification attached as Annex A.

b) to 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 issued by Public Works and Government Services Canada (PWGSC). The Manual is available on the PWGSC Website:

<http://sacc.pwgsc.gc.ca/sacc/index-e.jsp> .

#### 2.1 General Conditions

2030,(2014-09-25), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract. (with the exception of Article 26 which is deleted in its entirety and replace with Article 42 here below).

Section 22 of 2030 is amended in Annex E Warranty.

#### 2.2 Supplemental General Conditions

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

#### 4.1 Work Period

Work is to commence and be completed during the Work Period as follows:

Start of work: January 19<sup>th</sup>, 2015

End of work: April 05<sup>th</sup>, 2015

See also the respective working dates listed for each ship in Appendix A technical documents. 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.

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## 5. Authorities

### 5.1 Contracting Authority

The Contracting Authority for the Contract is:

Mathieu Gagnon  
Chef aux approvisionnements Marine / Marine Supply Chief  
Travaux publics et Services gouvernementaux Canada / Public Works and Government Services Canada  
Région du Québec/Québec area  
Division marine /marine division  
1550, avenue D'Estimauville, Québec, (Québec) G1J 0C4,  
Quebec, Canada  
[mathieu.gagnon@tpsgc-pwgsc.gc.ca](mailto:mathieu.gagnon@tpsgc-pwgsc.gc.ca)  
Téléphone/phone: (418) 649-2883  
Télécopieur/Fax: (418) 648-2209

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

The Technical Authority for the Contract is:

*Name will be determined at Contract award*

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.

### 5.3 Inspection Authority/Inspector

The Inspection Authority for the Contract is:

See section 5.2

The Inspection Authority is the Department of Public Works and Government Services Canada, who for the purposes of this requirement is the inspector responsible for inspection of the work and acceptance of the finished work under this requirement. The Inspection Authority will be represented on-site by a designated inspector and such other Government of Canada inspectors who will from time to time be assigned in support of the designated Inspector.

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## 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 Method of Payment

SACC Manual Clause	H1000C (2008-05-12)	Single Payment
SACC Manual Clause	C6000C (2011-05-16)	Limitation of Price

## 7. Invoicing Instructions

7.1 The Contractor must submit invoices in accordance with the information required in Section 13 of 2030, (2014-09-25), General Conditions - Higher Complexity - Goods

### 7.2 Invoice

Invoice to be made to the name of:

[DFOinvoicing-MPOfacturation@dfo-mpo.gc.ca](mailto:DFOinvoicing-MPOfacturation@dfo-mpo.gc.ca)

Write the name of the contact person;

Michelle Turcotte – Tel. 418 648-5930  
Mailing Address  
Pêches et Océans Canada  
PO Box 1901, STN A  
Fredericton (Nouveau-Brunswick)  
E3B 5G4

Electronic copy to be sent for verification to:

[mathieu.gagnon@tpsgc-pwgsc.gc.ca](mailto:mathieu.gagnon@tpsgc-pwgsc.gc.ca)

## 8. Certifications

### 8.1 Generality

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 \_\_\_\_\_.

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## 10. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the Supplemental General Conditions 1029, (2010-08-16), Ship Repairs;
- (c) General Conditions 2030, (2014-09-25) - Higher Complexity - Goods;
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Insurance Requirements;
- (g) Annex E, Warranty;
- (h) 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 cinq (5) 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 *(Not used)*

## 14. Parking *(Not used)*

## 15. Sub-contracts and Sub-contractor List *(Not used)*

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## **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 arisings. 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 (Not used)**

## **19. Trade Qualifications**

The Contractor must use qualified, certificated (if applicable) and competent tradespeople 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 tradespeople. This request should not be unduly exercised but only to ensure qualified tradespeople are on the job

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

## **21. ISO 9001:2000 - Quality Management Systems (Not used)**

## **22. Quality Control Plan (Not used)**

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.

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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 W47.1, Certification of Companies for Fusion Welding of Steel, section 2;
- (b) CSA W59, Welded steel construction (metal arc welding); and

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.

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**25. Fueling and De-fueling a Crown Vessel** *(Not used)*

**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** *(Not used)*

**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** *(Not used)*

**30. Vessel manned Refits**

SACC Manual Clause A0032C (2011-05-16) Vessel Manned Refits

**31. Pre-Refit Meeting**

A Pre-Refit meeting will be convened and chaired by the Contracting Authority at the Contractor's facility two (2) working days before the commencement of the work period.

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### **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, 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**

SACC Manual Clause A0290C (2008-05-12) Hazardous Waste - Vessels

### **36. Government Site Regulations**

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

### **37. Scrap and Waste Material**

SACC Manual Clause A9055C (2010-08-16) Scrap and Waste Material

### **38. Stability and Weight Management *(Not used)***

**39. Vessel - Access by Canada** *(Not used)*

**40. Title to Property - Vessel** *(Not used)*

**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.

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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.
  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.

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**ANNEX A**

**REQUIREMENT - SPECIFICATION**

**See electronic Annex.**

**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 annex ‘I’ the bid submission stage.**

**B1 Contract Firm Price**

<b>A)</b>	<b>Known Work</b> For work as stated in Contract Clause 1a), Specified in Annex “A” for a FIRM PRICE of:	\$ _____
<b>B)</b>	<b>Applicable taxes</b>	\$ _____
<b>C)</b>	<b>Total Firm Price</b>	\$ _____

**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 10 percent, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, calculated at 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 usage 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.

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## ANNEX C

### INSURANCE REQUIREMENTS

#### C.1 Ship Repairers' Liability Insurance

1. The Contractor must obtain Ship Repairer's Liability Insurance and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$10,000,000 per accident or occurrence and in the annual aggregate
2. The Ship Repairer's Liability insurance must include the following:
  - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada, represented by Public Works and Government Services Canada.
  - (b) waiver of subrogation rights: Contractor's insurer to waive all rights of subrogation against Canada as represented by the Department of Public Works and Government Services Canada and the Canadian Coast Guard for any and all loss of or damage to the vessel, however caused.
  - (c) Notice of Cancellation: The Insurer will endeavor 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

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$10,000,000 per accident or occurrence and in the annual aggregate
2. The Commercial General Liability Insurance policy must include the following:
  - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
  - (b) Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.

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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 : to protect the Contractor for liabilities arising in the management and administration of statutory and contractual entitlements of its employees.
  - (h) Notice of Cancellation: The Insurer agrees 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 72 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

In addition, if the Contractor decides NOT to obtain Ship Repairers' Liability Insurance. (See Article C1) then the Commercial General Liability Insurance Policy must also include the following:

- a) Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
- b) Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
- c) Amendment to the Watercraft Exclusion to extend to incidental repair operations on board watercraft.

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## 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;

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

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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 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.
- (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.

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- (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.
- (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.

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**ANNEX E**

**WARRANTY**

**2030 (2014-09-25) General Conditions 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.

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## **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.
- (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.

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## **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 days and multiplied by the number of days remaining in the three hundred and sixty-five (365) days day 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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## Appendix 1 of Annexe E



Travaux publics et Services  
gouvernementaux Canada  
Public Works and Government  
Services 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	<b><u>Effect on Vessel Operations</u></b> <b><u>Effet sur des opérations de navire</u></b>  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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**3. Contractor's Corrective Action – La modalité de reprise de l'entrepreneur**

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Contractor's Name and Signature – Nom et signature de l'entrepreneur

Date of Corrective Action - Date de modalité de reprise

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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**

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Signature – Signature

Date

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**ANNEX F**

**VESSEL CUSTODY**

**(NOT USED)**

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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**

**I1 Price for Evaluation**

<b>A)</b>	<b>Known Work</b> For work as stated in Part 1 Clause 2a, Specified in Annex “A” and detailed in the attached Pricing Data Sheets Appendix 1 of Annex “I”, for a FIRM PRICE of:	_____ \$
<b>B)</b>	<b>Unscheduled Work</b> <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: 350 person hours X \$ _____ per hour for a PRICE of: <b>See Note I2.1 and I2.2 below.</b>	_____ \$
<b>C)</b>	<b>EVALUATION PRICE</b> GST Excluded, [A + B]: <div style="text-align: right;">For an EVALUATION PRICE of :</div>	_____ \$

**I2 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 Goods and Services Tax or Harmonized Sales Tax as applicable, of the total cost of material and labour. The firm *hourly Charge-out Labour Rate* and the material mark-up will remain firm for the duration of the Contract and any subsequent amendments thereto."

**I2.1:** Notwithstanding definitions or usage 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.

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**APPENDIX 1 OF ANNEX I**

PRICING DATA SHEETS		
Item	Description	Firm Price
<b>4</b>	<b>CCGS CAPORAL KAEBLE</b>	
<b>4.10</b>	Safety and security equipment	
	4.10.1 Annual inspection of rescue Zodiac	\$ _____
	4.10.2 Fuel hose certification (Final amount prorated)  Price for one (1) 12 meters hose \$ _____ Price for one (1) 5 meters hose \$ _____ Total : \$ _____	\$ _____
	4.10.3 Inspection of Zodiac hoist hooks (Final amount prorated) Price for one (1) Fast RSQ hoist hook \$ _____ X 2 hooks = \$ _____ Price for one (1) hoist hook NEM \$ _____ X 1 hook = \$ _____ Total : \$ _____	\$ _____
	4.10.4 Inspection of potable fire extinguishers (Final amount prorated) Price for one (1) extinguisher Dry ABC 16 lbs 10 oz \$ _____ X 6 extinguishers = \$ _____ Price for one (1) extinguisher CO2 BC 33 lbs 6 oz \$ _____ X 5 extinguishers = \$ _____ Price for one (1) extinguisher Foam AB 27 lbs 9 oz \$ _____ X 11 extinguishers = \$ _____ Price for one (1) extinguisher Dry ABC 33 lbs 11 oz \$ _____ X 3 extinguishers = \$ _____ Price for one (1) extinguisher Classe K 20 lbs 5 oz \$ _____ X 2 extinguishers = \$ _____ Price for one (1) extinguisher CO2 BC 25 lbs 12oz \$ _____ X 1 extinguisher = \$ _____ Price for one (1) extinguisher Dry ABC 8 lbs 3 oz \$ _____ X 4 extinguishers = \$ _____ Total : \$ _____	\$ _____
	4.10.5 Fire detection system	\$ _____
	4.10.6 Annual inspection of fixed fire suppression system	\$ _____
	4.10.7 Annual inspection of rescue boat davit	\$ _____
	<b>Total for 4.10 :</b>	<b>\$ _____</b>
<b>4.13</b>	Vessel's generation of electrical power	
	4.13.1 Verification of electrical connection into power panel	\$ _____
	<b>Total for 4.13 :</b>	<b>\$ _____</b>
<b>4.16</b>	Domestic systems	
	4.16.1 Annual inspection of heating, ventilation, air conditioning and refrigeration systems	\$ _____
	<b>Total for 4.16 :</b>	<b>\$ _____</b>
<b>4.18</b>	Communication and navigation systems	
	4.18.1 Inspection of vessel's radio	\$ _____
	<b>Total for 4.18 :</b>	<b>\$ _____</b>
<b>ITEM 4 – TOTAL FIRM PRICE FOR THE CCGS CAPORAL KEABLE =</b>		<b>\$ _____</b>

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PRICING DATA SHEETS		
Item	Description	Firm Price
<b>5</b>	<b>CCGS A. LEBLANC</b>	
<b>5.10</b>	<b>Safety and security equipment</b>	
	5.10.1 Annual inspection of rescue Zodiac	\$ _____
	5.10.2 Fuel hose certification (Final amount prorated)	
	Price for one (1) 12 meters hose \$ _____ Price for one (1) 5 meters hose \$ _____ Total : \$ _____	\$ _____
	5.10.3 Inspection of Zodiac hoist hooks (Final amount prorated)	
	Price for one (1) Fast RSQ hoist hook \$ _____ X 2 hooks = \$ _____ Price for one (1) hoist hook NEM \$ _____ X 1 hook = \$ _____ Total : \$ _____	\$ _____
	5.10.4 Inspection of portable fire extinguishers (Final amount prorated)	
	Price for one (1) extinguisher Dry ABC 7.54 kg \$ _____ X 6 extinguishers = \$ _____ Price for one (1) extinguisher CO2 BC 15.1 kg \$ _____ X 3 extinguishers = \$ _____ Price for one (1) extinguisher Foam AB 12.5 kg \$ _____ X 10 extinguishers = \$ _____ Price for one (1) extinguisher Class AK 9.22 kg \$ _____ X 2 extinguishers = \$ _____ Price for one (1) extinguisher CO2 BC 15.8 kg \$ _____ X 4 extinguishers = \$ _____ Price for one (1) extinguisher Dry ABC 14.94 kg \$ _____ X 2 extinguishers = \$ _____ Price for one (1) extinguisher Dry ABC 3.72 kg \$ _____ X 2 extinguishers = \$ _____ Price for one (1) extinguisher Dry ABC 1 kg \$ _____ X 1 extinguisher = \$ _____ Total : \$ _____	\$ _____
	5.10.5 Fire detection system	\$ _____
	5.10.6 Annual inspection of fixed fire suppression system	\$ _____
	5.10.7 Annual inspection of lifeboat davit	\$ _____
	<b>Total for 5.10 :</b>	<b>\$ _____</b>
<b>5.13</b>	<b>Vessel's generation of electrical power</b>	
	5.13.1 Verification of electrical connection into power panel	\$ _____
	<b>Total for 5.13 :</b>	<b>\$ _____</b>
<b>5.16</b>	<b>Domestic systems</b>	
	5.16.1 Annual inspection of heating, ventilation, air conditioning and refrigeration systems	\$ _____
	<b>Total for 5.16 :</b>	<b>\$ _____</b>
<b>5.18</b>	<b>Communication and navigation systems</b>	
	5.18.1 Inspection of vessel radio	\$ _____
	<b>Total for 5.18 :</b>	<b>\$ _____</b>
<b>ITEM 5 – TOTAL FIRM PRICE FOR THE CCGS A. LEBLANC =</b>		<b>\$ _____</b>

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PRICING DATA SHEETS		
Item	Description	Firm Price
<b>6</b>	<b>CCGS LEIM</b>	
<b>6.10</b>	<b>Safety and security equipment</b>	
	6.10.1 Portable fire extinguishers (Final amount prorated) Price for one (1) extinguisher CO2 BC 10 lb \$ _____ X 4 extinguishers = \$ _____ Price for one (1) extinguisher Foam AB 9 litres \$ _____ X 3 extinguishers = \$ _____ Price for one (1) extinguisher Dry chemical 10 lb \$ _____ X 4 extinguishers = \$ _____ Price for one (1) extinguisher Dry chemical 2,5 lb \$ _____ X 1 extinguisher = \$ _____ Total : \$ _____	\$ _____
	6.10.2 Fire detection system	\$ _____
	6.10.3 Annual inspection of fixed fire suppression system	\$ _____
	6.10.4 Annual inspection of rescue boat davit	\$ _____
	<b>Total for 6.10 :</b>	<b>\$ _____</b>
<b>6.14</b>	<b>Power distribution</b>	
	6.14.1 Electrical work (20 hours) (Final amount prorated) Hourly rate \$ _____ / hour X 20 hours = \$ _____	\$ _____
	<b>Total for 6.14 :</b>	<b>\$ _____</b>
<b>6.15</b>	<b>Auxiliary systems</b>	
	6.15.1 Stern tube and steering gear cooling pump	\$ _____
	<b>Total for 6.15 :</b>	<b>\$ _____</b>
<b>6.16</b>	<b>Domestic systems</b>	
	6.16.1 Annual inspection of heating, ventilation, air conditioning and refrigeration systems	\$ _____
	<b>Total for 6.16 :</b>	<b>\$ _____</b>
<b>6.17</b>	<b>Deck equipment / Vessel support systems</b>	
	6.17.1 Corrective maintenance of steering gear hydraulic systems	\$ _____
<b>6.18</b>	<b>Communication and navigation systems</b>	
	6.18.1 Radio inspection	\$ _____
	<b>Total for 6.18 :</b>	<b>\$ _____</b>
<b>ITEM 6 – TOTAL FIRM PRICE FOR THE CCGS LEIM =</b>		<b>\$ _____</b>

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PRICING DATA SHEETS		
Item	Description	Firm Price
<b>7</b>	<b>CCGS ILE SAINT OURS</b>	
<b>7.10</b>	<b>Safety and security equipment</b>	
	7.10.1 Aft port side fire pump	\$ _____
	7.10.2 Forward port side bilge pump	\$ _____
	7.10.3 Water cannon pump	\$ _____
	7.10.4 Fire extinguisher and fixed fire suppression system certification (Final amount prorated) Price for one (1) extinguisher CO2 BC 5 lb \$ _____ X 4 extinguishers = \$ _____ Price for one (1) extinguisher GLS K 1.6 \$ _____ X 1 extinguisher = \$ _____ Price for one (1) extinguisher ABC 10 lb \$ _____ X 8 extinguishers = \$ _____ Price for one (1) extinguisher ABC 5 lb \$ _____ X 5 extinguisher = \$ _____ Price for engine room fixed fire suppression system (2 cylinders 75 lb CO2 & accessories) = \$ _____ Price for forward cargo fixed fire suppression system (1 cylinder 100 lb CO2 & accessories) = \$ _____ Total : \$ _____	\$ _____
	<b>Total for 7.10 :</b>	\$ _____
<b>7.11</b>	<b>Hull and related structure</b>	
	7.11.1 Leaks on the wheelhouse roof (32 hours) (Final amount prorated) Hourly rate \$ _____ / hour X 32 hours = \$ _____	\$ _____
	7.11.2 Engine room emergency exit door (8 hours) Hourly rate \$ _____ / hour X 8 hours = \$ _____	\$ _____
	<b>Total for 7.11 :</b>	\$ _____
<b>7.12</b>	<b>Starboard propulsion and manoeuvring systems</b>	
	7.12.1 Port and starboard propulsion reducers	\$ _____
	7.12.2 Sea water pump in the starboard propulsion engine	\$ _____
	7.12.3 Wheelhouse dials indicators	\$ _____
	7.12.4 Starboard stern tube	\$ _____
	<b>Total for 7.12 :</b>	\$ _____
<b>7.13</b>	<b>Vessel's generation of electrical power</b>	
	7.13.1 Port side alternator cleaning and insulation test	\$ _____
	7.13.2 Starboard alternator cleaning and insulation test	\$ _____
	<b>Total for 7.13 :</b>	\$ _____
<b>7.15</b>	<b>Auxiliary systems</b>	
	7.15.1 Fuel transfer pump	\$ _____
	7.15.2 Forward starboard air compressor	\$ _____
	7.15.3 Forward hold hydraulic pump	\$ _____
	7.15.4 Wheelhouse dial indicators	\$ _____
	<b>Total for 7.15 :</b>	\$ _____
<b>ITEM 7 – TOTAL FIRM PRICE FOR THE CCGS ILE SAINT OURS =</b>		<b>\$ _____</b>

Solicitation No – N° de l'invitation  
 F3774-14N630/A  
 Client Ref No. – N° de réf. du client  
 F3774-14N630

Amd. No. – N° de la modif.  
 File No. – N° du dossier  
 QCL-4-37240

Buyer ID – id de l'acheteur  
 qcl 036

**PRICING DATA SHEETS**

Item	Description	Firm Price
<b>8</b>	<b>CCGS GARDE-CÔTE 03</b>	
<b>8.10</b>	<b>Safety and Security Equipment</b>	
	8.10.1 Portable fire extinguishers (Final amount prorated) Price for one (1) extinguisher CO2 50 lb \$ _____ X 1 extinguisher = \$ _____ Price for one (1) extinguisher ABC 10 lb \$ _____ X 5 extinguishers = \$ _____ Total : \$ _____	\$ _____
	8.10.2 Fire detection system	\$ _____
	8.10.3 Annual inspection of fixed fire suppression system	\$ _____
	<b>Total for 8.10 :</b>	<b>\$ _____</b>
<b>8.11</b>	<b>Hull and structure</b>	
	8.11.1 insulation protection	\$ _____
	<b>Total for 8.11 :</b>	<b>\$ _____</b>
<b>8.12</b>	<b>Propulsion and manoeuvring systems</b>	
	8.12.1 "V-Drive" major overhaul starboard	\$ _____
	8.12.2 Révision majeure de la transmission "CAPITOL GEAR" transmission major overhaul	\$ _____
	<b>Total for 8.12 :</b>	<b>\$ _____</b>
<b>8.13</b>	<b>Vessel's generation of electrical power</b>	
	8.13.1 Port side alternator	\$ _____
	8.13.2 Starboard side alternator	\$ _____
	<b>Total for 8.13 :</b>	<b>\$ _____</b>
<b>8.14</b>	<b>Power distribution</b>	
	8.14.1 Installation of electrical receptacles (Final amount prorated) Price for one (1) 120 volts outlet \$ _____ x 4 outlets = \$ _____	\$ _____
	8.14.2 Lighting replacement (Final amount prorated) Price for the replacement of one (1) light \$ _____ x 2 lights = \$ _____	\$ _____
	8.14.3 Obsolete electrical wires (40 hours) (Final amount prorated) Hourly rate \$ _____ / hour X 40 hours = \$ _____	\$ _____
	8.14.4 Console check	\$ _____
<b>ITEM 8 – TOTAL FIRM PRICE FOR THE CCGS GARDE-CÔTE 03 =</b>		<b>\$ _____</b>

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 F3774-14N630/A  
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 F3774-14N630

Amd. No. – N° de la modif.  
 File No. – N° du dossier  
 QCL-4-37240

Buyer ID – id de l'acheteur  
 qcl 036

PRICING DATA SHEETS		
Item	Description	Firm Price
9	<b>CCGS FCG SMITH</b>	
9.10	Safety and security equipment	
	9.10.1 Inspection of portable and galley fire extinguishers (Final amount prorated)	
	Price for one (1) extinguisher CO2 12 lb \$ _____ X 8 extinguishers = _____	
	Price for one (1) extinguisher 2.5 ABC \$ _____ X 1 extinguisher = _____	
	Price for one (1) extinguisher 5 ABC \$ _____ X 12 extinguishers = _____	
	Price for one (1) extinguisher 10 ABC \$ _____ X 1 extinguisher = _____	
	Price for one (1) extinguisher 20 ABC \$ _____ X 3 extinguishers = _____	
	Price for one (1) extinguisher 6 litres K \$ _____ X 1 extinguisher = _____	
	Total : _____	\$ _____
	<b>Total pour 9.10 :</b>	<b>\$ _____</b>
<b>ITEM 9 – TOTAL FIRM PRICE FOR THE CCGS FCG SMITH =</b>		<b>\$ _____</b>

PRICING DATE SHEET – SUMMARY		
Item	Description	Firm Price
	<b>SOREL-TRACY FLEET</b>	
4.	<b>CCGS CAPORAL KAEBLE</b>	
	A) Total for item 4 :	\$ _____
5.	<b>CCGS A. LEBLANC</b>	
	B) Total for item 5 :	\$ _____
6.	<b>CCGS LEIM</b>	
	C) Total for item 6 :	\$ _____
7.	<b>CCGS ÎLE SAINT OURS</b>	
	D) Total for item 7 :	\$ _____
8.	<b>CCGS GARDE-CÔTE 03</b>	
	E) Total for item 8 :	\$ _____
9.	<b>CCGS FCG SMITH</b>	
	F) Total for item 9 :	\$ _____
<b>A) SCHEDULE WORK TOTAL FIRM PRICE FOR SOREL-TRACY FLEET (Items 4+5+6+7+8+9)</b>		<b>\$ _____</b>

# **Seasonal Vessel Repairs Sorel 2014–2015**

CCGS CAPORAL KAEBLE (C 181)  
CCGS A. LEBLANC (A 028)  
CCGS LEIM (L 023)  
CCGS ILE SAINT OURS (I 002)  
CCGS GARDE-CÔTE 03 (C 035)  
CCGS F.C.G. SMITH (F 005)

Specification no.: 14IN630  
Date: 2014-12-17  
Version 5

Prepared by: Marine Engineering  
101 Champlain Blvd.  
Québec, QC  
G1K 7Y7

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## 1.0 GENERAL NOTES

### 1.1 IDENTIFICATION

1.1.1 These General Notes describe the CCG requirements applicable to all accompanying Technical Specifications.

### 1.2 REFERENCES

1.2.1 Applicable regulations and documentation:

FSSM Procedures	Title	Included Yes/No
7.B.2.	Fall Protection	yes
7.B.3	Hazard Prevention Program	no
7.D.9	Entry Into Confined Spaces	yes
7.D.11	Hotwork	yes
7.D.19	Lockout and Tagout	yes
7.F.6	Handling, Storage & Disposal of	no

	Hazardous Material	
7.F.9	Paint and Other Coatings	no
7.F.10	Controlling Halocarbon Use Aboard Ships	no
7.F.12	Potable Water Quality	no
10.A.2	Contractor Liability	no
Ship Specific	Vessel Specific - Asbestos Management Plan	no
	<b>Publications</b>	
TP3177E	Standard for the Control of Gas Hazards in Vessels to be Repaired or Altered	no
T127E	Transport Canada Marine Safety Electrical Standard	no
IEEE 45	Recommended Practice for Electrical Installation on Ships	no
70-000-000-EU-JA-001	Specification for the Installation of Shipboard Electronic Equipment	Available from: CCG/ITS
CSA W47.1	Certification of Companies for Fusion Welding of Steel Structures Division 2 Certification	yes
CSA W47.2	Certification of Companies for Fusion Welding of Aluminum	no
CSA W59	Welded Steel Construction – Metal Arc Welding	no
CSA W59.2	Welded Aluminum Construction	no
	<b>Acts</b>	
CSA	Canada Shipping Act	no
CLC	Canada Labour Code	no
	<b>Regulations</b>	
MOHS	Maritime Occupational Health and Safety	no

### 1.3 OCCUPATIONAL HEALTH AND SAFETY

- 1.3.1 The Contractor and all sub-contractors shall 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 the Contractor’s employees, including any sub-contractors shall attend a safety orientation meeting of the vessel prior to the commencement of any work in order to familiarize the Contractor’s employees with ship specific hazards and permit systems for work protocols as well as procedures for Security, Hazard Prevention, Hazard

Intervention and Pre-Job Safety Assessments. The Contractor will have access to an uncontrolled copy of the Fleet Safety and Security Manual.

- 1.3.3 The Contractor shall comply with the Fleet Safety and Security Manual, DFO/5737 and shipboard work instructions in addition to the applicable Canada Labour Code regulations while performing work involving the following;
- Hot Work;
  - Work Aloft;
  - Confined Space Entry;
  - Gas Freeing for Entry and Hot Work;
  - Lock Out/Tag Out;
  - Pre-Job Safety Assessments.
- 1.3.4 For the purpose of the Lock Out/Tag Out procedure the Contractor shall supply locks and locking devices for the Contractor's employees in addition to those provided by the Chief Engineer for the ship's crew.
- 1.3.5 The Contractor and Contractor's employees will not have access to the vessel's washrooms and crew mess facilities. The Contractor shall provide the necessary amenities for the Contractor's and sub-contractors employees as required.

#### **1.4 ACCESS TO WORKSITE**

- 1.4.1 The Contractor shall ensure the TA and CG staff has 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 MSD sheets 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 shall ensure that every employer, and any person acting on behalf of an employer, shall ensure that persons refrain from smoking in any work space under the control of the employer. The Contractor shall 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, the TA and the TI shall 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 shall take digital pictures of each area showing the outfit therein and download the photos in JPG format onto a CD or DVD. Each picture shall be dated and labeled as to the location on the vessel. Copies of this CD or DVD are to be provided to the TA and TI for reference purposes within 48 hours of the start of the contract.

- 1.7.2 The Contractor, during the work period shall 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 Upon completion of this contract, the Contractor shall 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, the TA and TI shall perform a 'walk through' of the vessel to view all areas where work was performed by the Contractor. Any deficiencies or damage noted shall be recorded and compared to the photos and if deemed to have been caused by the Contractor as a result of the work the damage shall 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 qualified 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 and the TI before the end of the contract.
- 1.8.2 The Contractor must notify the TA and TI 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). This may be accomplished as suggested below and only with the written permission of the TA:
  - Disabling only one portion of a system at a time;
  - By maintaining system function using spares while work is in progress;
  - Other means acceptable to and approved by the TA.
- 1.8.4 The Contractor must note that 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 Contractor must recharge and certify at his cost, container(s) or systems that are discharged as a result of such work.

## **1.9 TOUCH-UP / DISTURBED PAINT**

- 1.9.1 Unless stated otherwise the Contractor shall supply and apply two coats of marine primer compatible with the vessel's existing coating system to all new and/or disturbed metal surfaces.
- 1.9.2 The Contractor shall prepare all new and disturbed steelwork to the paint manufacturer's standards prior to painting.

### **1.10 CCG EMPLOYEES AND OTHERS ON THE VESSEL**

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

### **1.11 REGULATORY INSPECTIONS AND/OR CLASS SURVEYS**

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

### **1.12 TEST RESULTS AND DATA BOOK**

- 1.12.1 The Contractor shall develop a Test and Trials Plan which shall include as a minimum, all tests and trials stated in the specification. This plan shall be provided for TA and TI review one week(s) prior to the originally scheduled Tests and Trials commencement.
- 1.12.2 All tests, measurements, calibrations and readings must be recorded, signed by the person taking the measurements, dated and provided in report format both in hard copy and electronic format, to the TA, TI and TCMS.
- 1.12.3 Recorded dimensions shall be to a precision of three decimal places (unless otherwise stated) in the measuring system currently in use on the vessel.
- 1.12.4 The Contractor shall provide to the TA and TI current and valid calibration certificates for all instrumentation used in the Test and Trials Plan showing that the instruments have been calibrated in accordance with the manufacturer's instructions.
- 1.12.5 Hard copy reports shall be bound in standard 3-ring binders, type written on letter size paper and indexed by specification number. Electronic copies shall be in unprotected Adobe PDF format and provide on CD-ROM media. The Contractor shall provide 3 hard copies and 1 electronic copy of all reports.
- 1.12.6 All documentation from the contract period shall be inserted in a data book and delivered to the TA and TI on completion of the contract.

### **1.13 CONTRACTOR SUPPLIED MATERIALS AND TOOLS**

- 1.13.1 The Contractor must ensure all materials are new and unused.

- 1.13.2 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.
- 1.13.3 Where no particular item is specified or where substitution must be made, the TA must approve the substituted item in writing. The Contractor must provide information about materials used, certificate of grade and quality of various materials to the TA and TI prior to use.
- 1.13.4 The Contractor shall provide all equipment, devices, tools and machinery such as cranes, staging, scaffolding and rigging necessary for the completion of the work in this specification.
- 1.13.5 The Contractor shall provide waste disposal services for any oil, oily waste or other hazardous or controlled waste generated by the work of this specification. The Contractor shall provide waste disposal certificates for all of the above generated waste and the disposal certificates shall indicate that the disposal was in accordance with Federal, Provincial and Municipal regulations in effect.

#### **1.14 GOVERNMENT SUPPLIED MATERIALS & TOOLS**

- 1.14.1 All tools are Contractor supplied unless otherwise stated in the technical specifications.
- 1.14.2 Where tools are supplied by the TA they shall 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.
- 1.14.3 Any Government supplied material (GSM) shall 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.

#### **1.15 RESTRICTED AREAS**

- 1.15.1 The Contractor must not enter the following areas except to perform work as required by the specifications: all cabins, offices, workshops, Engineers' office, Wheelhouse, Control Room, all washrooms, Galley, Mess Rooms, Lounge areas and any other areas restricted by signage.
- 1.15.2 The Contractor must give the TA 24 hours advance notice prior to working in any accommodation areas or office spaces. This will allow CCG adequate time to move personnel and secure the areas.

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

- 1.16.1 The Contractor must coordinate an inspection with the TA and TI 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.
- 1.16.2 Any damage incurred as a result of the Contractor's work and that is attributable to the Contractor's work performance shall be repaired by the Contractor at his expense. Materials used in any replacement or repairs must meet the criteria for Contractor supplied material noted above in section Contractor Supplied Materials and Tools.

- 1.16.3 The Contractor must protect all equipment and surrounding areas from damage. Work areas are to be protected from the ingress of water, welding and blasting grit etc. Temporary covers to work areas must be installed.

### **1.17 RECORDING OF WORK IN PROGRESS**

- 1.17.1 The TA and TI may record any work in progress using various means including, but not limited to photography and video, digital or film.

### **1.18 LIST OF CONFINED SPACES**

- 1.18.1 The Contractor may request a list of the vessel's identified confined spaces at the Pre-Refit meeting.

### **1.19 LEAD PAINT AND PAINT COATINGS**

- 1.19.1 The Contractor shall not use lead based paints.
- 1.19.2 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 shall 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.
- 1.19.3 The Contractor must provide HC product approval for underwater hull surface paints controlled by HC and the Pest Management Regulatory Agency.

### **1.20 ASBESTOS CONTAINING MATERIALS**

- 1.20.1 The Contractor shall not use any asbestos containing materials.
- 1.20.2 Handling of any asbestos containing materials shall 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 and Security Manual. The Contractor shall provide the TA and TI 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.

### **1.21 REMOVED MATERIALS AND EQUIPMENT**

- 1.21.1 All removed equipment as a result of this specification shall remain the property of the Coast Guard unless otherwise instructed in the specification sections.

### **1.22 WELDING CERTIFICATION**

- 1.22.1 For any work requiring the application of fusion welding for steel structures the Contractor and/or the sub-contractor welders shall be certified by the Canadian Welding Bureau in accordance with CSA Standards W47.1-03, latest revision – Certification of Companies for Fusion Welding of Steel Division 2 Certification as a minimum. Current copies of certification (including those of the welders) shall be provided to the TA and the TI.

### **1.23 ELECTRICAL INSTALLATIONS**

1.23.1 All electrical installations and repairs shall 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.

### **1.24 ELECTRIC POWER**

1.24.1 CCG shall allow the use of a limited number of 115 VAC, 1 phase, 15 amp receptacle(s) for the use of the Contractor for the contracted period based on the electrical network capacity.

## **2. SERVICES**

### **3. LIST OF ACRONYMS**

BV	Bureau Veritas
CA	Contract Authority (PWGSC)
CCG	Canadian Coast Guard
CLC	Canada Labour Code
CSM	Contractor Supplied Material
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
DFO	Department of Fisheries and Oceans
FSSM	Fleet Safety & Security Manual (CCG)
FSR	Field Service Representative
GSM	Government Supplied Materials
HC	Health Canada
IEEE	Institute of Electrical and Electronic Engineers
LOA	Length Over All
MSDS	Material Safety Data Sheet
OHS	Occupational Health and Safety
PWGSC	Public Works and Government Services Canada
SSMS	Safety & Security Management System
TBS	Treasury Board of Canada Secretariat
TCMS	Transport Canada Marine Safety
TI	Inspection Authority – Technical Inspector (PWGSC)
TA	Technical Authority – Owner’s Representative (CCG)
WHMIS	Workplace Hazardous Material Information System

## 4. CCGS CAPORAL KAEBLE (C 181)

Maintenance Manager: <b>Gaël Therrien</b>	Email: <b>gael.therrien@dfo-mpo.gc.ca</b>	Office: <b>418-648-6896</b> Cell: <b>418-931-1850</b>
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**Date of work: From contract award to March 25, 2015**

### 4.10. SAFETY AND SECURITY EQUIPMENT

#### 4.10.1 ANNUAL INSPECTION OF RESCUE ZODIAC

Have an authorized Zodiac representative complete the annual certification of the Zodiac lifeboat. Provide transportation.

Boat description:

Ribo 420

Serial no.: XDCC2244AF010

Date of manufacture: June 2010

O/B motor

Serial no.: MX-148204-0810

Provide the certificate and a full report on the inspection and repairs.

#### 4.10.2 FUEL HOSE CERTIFICATION

Provide the material and labour for performing the verification and hydrostatic test of two Goodyear Flexsteel Futura fuel-transfer hoses, one that is 1 inch by 12 metres long and one that is 1 inch by 5 metres long.

The working pressure of the hoses is 2 bar.

Each hose must have a stainless steel plate indicating the test date, working pressure, test pressure, hose serial number, and Contractor's name.

The Contractor shall provide to the Chief Engineer and the technical authority with a certificate for each hose.

#### 4.10.3 INSPECTION OF ZODIAC HOIST HOOKS

Have a manufacturer's representative conduct an annual certification of the release hooks on the Zodiacs. The crew will dismantle the hooks. Provide proof that this person is the hook manufacturer's representative.

List of hooks to be inspected:

- Two (2) Fast RSQ hooks      Serial no.: 0081 and 0076
- One hook NEM serial no.: 5871

The Contractor shall provide an inspection certificate and an inspection report for each hook. The vessel and the technical authority must receive this report.

#### **4.10.4 INSPECTION OF PORTABLE FIRE EXTINGUISHERS**

##### **4.10.4.1 – SCOPE**

The Contractor shall remove the fire extinguishers from the vessel and transport them to an authorized service centre, where maintenance and testing will be performed. They shall then be brought back to the vessel and reinstalled.

##### **4.10.4.2 – REFERENCES**

###### **Reference drawings/data plate information**

See list of fire extinguishers:

	<b>Navigation deck</b>
	<b>Main deck</b>
	<b>Lower deck</b>
	<b>Embarcation</b>
	<b>Extra</b>

Station #num.	year	Location	Brand & model	Type	Serial num.	min. Wheight (lbs)	last 6 years maintenance	Years of hydrostatic test 5/12 ans
1		RCMP room	Amerex	Dry ABC	AV92926	16lb10oz	01/2013	
3		RCMP room	Amerex	CO2 BC	AB881107	33lb6oz	01/2013	08A11
4		Wheelhouse	Amerex	Dry ABC	AV93258	16lb10z	01/2013	
N/A		Starboard battery compartment	Amerex	FoamAB	AC641029	27lb9oz	01/2013	
N/A		Portside battery compartment	Amerex	Dry ABC	BB421215	33lb11oz	04/2012	
6		Food shop in passageway	Amerex	Foam AB	AC790026	27lb9oz	01/2013	
8		Kitchen	Amerex	Classe K	AD18416	20lb5oz	01/2013	
9		Galley (dining room, for the moment)	Amerex	Foam AB	AC641003	27lb9oz	01/2013	
12		Electronic room	Amerex	CO2 BC	AB881069	33lb6oz	01/2013	08A11
13		Emergency generator	Amerex	CO2 BC	AB881086	33lb6oz	01/2013	08A11
14		Emergency generator	Amerex	Dry ABC	AV92945	16lb10oz	----	
31		Outside portside	Amerex	Dry ABC	AV93417	16lb10oz	----	
		Aft port side fueling station	Amerex	Foam AB	AD16062	27lb9oz		
15		Steering gear	Amerex	Foam AB	AC641032	27lb9oz	01/2013	
18		Control room	Amerex	Dry ABC	AV93464	16lb10oz	01/2013	
20		Bow thruster	Amerex	Foam AB	AC641028	27lb9oz	01/2013	
21		Passageway (toilet)	Amerex	Foam AB	AC641007	27lb9oz	01/2013	
22		Main engine room portsaide	Amerex	CO2 BC	AB881104	33lb6oz	01/2013	08A11
23		Main engine center fwd	Amerex	Foam AB	AC790010	27lb9oz	01/2013	
24		Starboard main engine room	Amerex	Foam ABC	AW41395	33lb11oz	01/2013	

25	center aft main engine room	Amerex	CO2 BC	AC412736	25lb12oz	----	
26	Starboard main engine room	Amerex	Foam AB	AC790022	27lb9oz	10/2012	
28	Engine room aux. Aft	Amerex	Mousse AB	AC641033	27lb9oz	01/2013	
29	Engine room aux. fwd	Amerex	CO2 BC	AB881101	33lb6oz	01/2013	08A11
30	Passeway (c/r)	Amerex	Foam AB	AC641015	27lb9oz	01/2013	
	Kaeble 1	Pyrene	Dry ABC	T821547	8lb3oz	----	
	Kaeble 1	Pyrene	Dry ABC	T821523	8lb3oz	----	
	Kaeble 2	Pyrene	Dry ABC	AE107015	8lb3oz	05/2011	
	Kaeble 2	Pyrene	Dry ABC	AE107660	8lb3oz	03/2011	
	Immersion suit	Amerex	Dry ABC	AV92974	16lb10oz	01/2013	
	Immersion suit	Amerex	Dry ABC	AW41389	33lb11oz	01/2013	
	Immersion suit	Amerex	Classe K	AD18417	20lb5oz	01/2013	

#### Equipment provided by owner

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### 4.10.4.3 – TECHNICAL DESCRIPTION

##### General

An annual inspection of portable fire extinguishers shall be performed. Fire extinguisher inspection and maintenance shall be entrusted to a qualified representative.

The Contractor shall remove the fire extinguishers in a sequence such that the number of fire extinguishers off the vessel is never more than a third of those that are on board. The Chief Engineer will determine the order in which the fire extinguishers shall leave the vessel.

##### Obstructions

It is the Contractor's responsibility to identify items causing an obstruction, to temporarily remove and store them, and then to reinstall them on the vessel.

Once the maintenance has been completed, the Contractor shall return all the fire extinguishers to the vessel and put them back in place according to the Chief Engineer's instructions.

##### Annual inspection

The fire extinguishers must undergo a visual inspection at least once a year. This inspection involves turning the fire extinguishers upside down and shaking them, top down, in order to loosen the powder that they contain.

#### **Preventive maintenance/Maintenance**

Dry chemical extinguisher: Every 6 years Work completed: We replaced the dry chemical and made sure that the device was functioning properly. A verification collar and a WHMIS label indicating the maintenance date must be attached, in compliance with standard NFPA10 or a more recent standard.

Water extinguisher, Type K, Co2: Every 5 years

#### **Hydrostatic test**

This test involves confirming that the container is in good condition by subjecting it to a pressure determined by the manufacturer.

Dry chemical extinguisher: Every 12 years

Water extinguisher, Type K, Co2: Every 5 years

#### **Refill**

When a fire extinguisher has been used, even partially, it must be refilled immediately. Note that a refill is not considered to be preventive maintenance.

#### **4.10.4.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Commanding Officer, the Chief Engineer or the person responsible for the vessel's maintenance.

##### **Tests**

Fire extinguisher tests shall be performed in compliance with the regulations of the Lloyd classification society.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

#### **4.10.4.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with two (2) paper copies of reports and checklists that explain in detail the work and necessary modifications. The Contractor shall also send an electronic copy of all reports to the person responsible for the vessel's maintenance.

#### **4.10.5 FIRE DETECTION SYSTEM**

##### **4.10.5.1 – SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a licensed company to perform the annual inspection and certification of the fire detection system.

##### **4.10.5.2 – REFERENCES**

###### **Reference drawings/data plate information**

Integrated fire detection system – Instruction manual  
AF6095-55500-04\_AF FIRE CONTROL PLAN\_Fr  
Fire Notifier NFS-320 fire detection system

###### **Standards**

Fleet Safety and Security Manual (DFO 5737)

###### **Regulations**

*Canada Shipping Act, 2001*

###### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

##### **4.10.5.3 – TECHNICAL DESCRIPTION**

###### **General**

- The vessel is equipped with a Techsol integrated fire detection system with a Fire Notifier NFS-320 panel. The Fire Notifier NFS-320 panel is connected to the integrated fire alarm system, which is part of the vessel's surveillance and alarm system.
- Before work begins, the Contractor shall arrange for a visit from a Lloyd Register classification society inspector.
- The Contractor shall retain the services of a licensed company to conduct the annual inspection and certification of the fire detection system.

###### **Location**

The fire detection system control panel is found on the port side of the wheelhouse.

###### **Obstructions**

It is the Contractor's responsibility to identify items causing an obstruction, to temporarily remove and store them, and then to reinstall them on the vessel.

##### **4.10.5.4 – PROOF OF PERFORMANCE**

###### **Inspection**

All work shall be completed to the satisfaction of the Chief Engineer.

###### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of

maintenance and annual certification certificates along with the original. The Contractor shall also send an electronic copy of all reports and certificates to the person responsible for the vessel's maintenance.

#### **4.10.5.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of all reports and certificates to the person responsible for the vessel's maintenance.

### **4.10.6 ANNUAL INSPECTION OF FIXED FIRE SUPPRESSION SYSTEM**

#### **4.10.6.1 – SCOPE**

- The purpose of this specification is to perform maintenance on and certify the fixed fire suppression system.
- The Contractor shall communicate with the Chief Engineer before undertaking the work for this item. This work shall be performed in conjunction with the portable fire extinguisher maintenance without reducing the fire suppression capacity aboard the vessel.
- The fixed fire suppression system is an FM200.

#### **4.10.6.2 – REFERENCES**

##### **Reference drawings/data plate information**

FM 200 system

Galley fire suppression system

##### **Standards**

- The Contractor must be licensed to certify this system by the Lloyd Register classification society, which the Contractor shall do in accordance with the most recent marine safety regulations in force.
- The Contractor shall also comply with the International Safety Management Code standards for hot work, confined space entry, fall protection and lock-out procedures.

##### **Regulations**

*Canada Shipping Act, 2001*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **4.10.6.3 – TECHNICAL DESCRIPTION**

##### **General**

- The Contractor shall retain the services of an authorized representative who will test and inspect the FM200 system and the vessel's galley fire extinguishing

system as part of the annual inspection and certification of this system. The Chief Engineer will be present at all tests.

- Aside from the following tests, the Contractor shall perform all tests required by the Lloyd Register inspector on site. In the estimate, the Contractor shall provide the cost of testing the alarms (indicator lights and sirens) on all devices, testing the nitrogen-releasing cylinders, testing ventilation closure devices, and testing slack loops and cables.
- The Contractor shall use air pressure to clean the pipes and pneumatic actuators and ensure that they work properly. The pipes and nozzles must be free of obstruction.
- The Contractor shall ensure that the alarm displays and sirens work properly. The Contractor shall weigh each cylinder and record the results. At the end of the refit, the Contractor shall provide the Chief Engineer with copies of all certificates.
- When the tests and inspections are completed, the Contractor shall reassemble and reactivate the systems.

#### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

#### **4.10.6.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer, the person responsible for vessel maintenance and the Lloyd Register inspector.

##### **Tests**

The Chief Engineer must be present for the system inspection and test.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

#### **4.10.6.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

#### **4.10.7 ANNUAL INSPECTION OF RESCUE BOAT DAVIT**

##### **4.10.7.1 SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a company licensed by wellind Lambie to perform the annual inspection and certification

of the lifeboat's davit and its lifting device.

#### **4.10.7.2 REFERENCES**

##### **Reference drawings/data plate information**

Operations and Maintenance Manual 0851A03

##### **Regulations**

*Canada Shipping Act, 2001*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **4.10.7.3 TECHNICAL DESCRIPTION**

##### **General**

Supplier: Wellin Lambie LTD

Supplier ref: 7773/7

Davit type: PIV1.0A

Assy no: 5601-1701

SWI: 1080 KG

The Contractor shall retain the services of a company licensed by the manufacture to conduct the annual inspection and certification of the davit and its integrated lifting device.

Check and adjust the limit switch  
Check the centrifugal break  
Do adjustment on luff out remote cable

##### **Location**

The davit is located on the port side of the wheelhouse.

##### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

#### **4.10.7.4 PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the Lloyd Register.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

#### **4.10.7.5 DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item.

The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

#### **4.11. HULL AND STRUCTURE**

N/A

#### **4.12. PROPULSION AND MANOEUVERING SYSTEMS**

N/A

#### **4.13. VESSEL'S GENERATION OF ELECTRICAL POWER**

##### **4.13.1 VERIFICATION OF ELECTRICAL CONNECTION INTO POWER PANEL**

###### **4.13.1.1 SCOPE**

Di inspection of the tightening on each connector and terminal bloc into the main power panel and emergency power panel .

###### **4.13.1.2 REFERENCES**

###### **Reference drawings/data plate information**

See picture MSPV

See annex picture **Regulations**  
*Canada Shipping Act, 2001*

###### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

###### **4.13.1.3 TECHNICAL DESCRIPTION**

###### **General**

Proceed with the complete isolation of each power panel. Each panel must be isolated physically from the power source.

A minimum of power must keep on board for safety reason.  
The work must be coordinate with chief engineer.

The contractor must check all electrical connection on terminal block, cable fixation and

contactor in each following panel:`

- Main switchboard (MCC and 600v distribution)
- Emergency switchboard
- 600 volt panel
- 120volt panel

All control and power cable must be checked.

The bolting on the main power bar must be checked and tight at the right torque corresponding at standard. A mark with a permanent pen must be done on each bolt that are verified.

For the bid purpose , supply an electrical specialist for period of (40) forty hours to execute the scope of work.

#### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

#### **4.13.1.4 PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer.

Supply a report with on irregular situation

#### **4.13.1.5 DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance

#### **4.14. POWER DISTRIBUTION**

N/A

#### **4.15. AUXILIARY SYSTEMS**

N/A

## **4.16. DOMESTIC SYSTEMS**

### **4.16.1 ANNUAL INSPECTION OF HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION SYSTEMS**

#### **4.16.1.1 – SCOPE**

Perform the annual inspection of refrigeration systems.

#### **4.16.1.2 – REFERENCE**

##### **Reference drawings/data plate information**

*Inventory of refrigeration systems on the CCGS Caporal Kaeble*

##### **Regulations**

*Canada Shipping Act, 2001*

*All work shall be completed in accordance with sections 2.7 and 2.8 of the Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems.*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **4.16.1.3 – TECHNICAL DESCRIPTION**

##### **General**

- (2) Bronswerk compressor for refrigeration and freezing. Model 4177-050-001 1.5 KW with 10 pounds of refrigerant R404A.
- For air conditioning, we have one Bronswerk compressor model 4177-030-001 575 v 22.1 with 40 pounds of refrigerant R410A.
- Perform a full inspection of all heating, ventilation, air conditioning and refrigeration system components. All breaks and failures shall be addressed as additional work on form 1379.
- Change oil on all compressor
- Conduct a test to detect refrigerant leaks on all air conditioning and refrigeration system components.
- Inspect the accommodation fan motor that is showing signs of failure.
- Check the operating parameters.
- Provide the certificate and registration number from a valid refrigeration mechanic's certificate.
- The Contractor shall affix a label with its contact information to each piece of equipment, stating that the equipment has been inspected and tested.

##### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily

removing and storing them, and then reinstalling them on the vessel.

#### **4.16.1.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer or the person responsible for the vessel's maintenance.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of inspection certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

#### **4.16.1.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

### **4.17. DECK EQUIPMENT/VESSEL SUPPORT SYSTEMS**

N/A

### **4.18. COMMUNICATION AND NAVIGATION SYSTEMS**

#### **4.18.1 INSPECTION OF VESSEL RADIO**

Provide a lump-sum price for inspecting the vessel's radio. The price shall include the cost of transportation, and housing and living expenses. Provide a fee schedule in case there is additional work.

Provide material and labour for inspecting the radio so that a checklist can be supplied for obtaining a radio inspection certificate from the Lloyd Register classification society. The zones covered must be for the Canadian coastlines and the Great Lakes Basin, in accordance with the *Ship Station (Radio) Technical Regulations, 1999*.

The radio checklist is to be given to the crew and an electronic copy sent to the technical authority.

The Contractor shall provide proof that Lloyd Register has authorized the Contractor to do the work.

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## 4.19 INTEGRATED CONTROL SYSTEMS

N/A

### **CERTIFICATES AND REPORTS:** CCGS Caporal Kaeble

Reference	Description	Deliverable document	Date received
4.10.1	Annual inspection of rescue Zodiac	Inspection certificate and report	
4.10.2	Fuel hose certification	Fuel hose certificate	
4.10.3	Inspection of Zodiac hoist hooks	Inspection certificate	
4.10.4	Fire system inspection	Fire system certificate	
4.10.5	Fire detection system	Certificate for fire detection system	
4.10.6	Annual inspection of fixed fire suppression system	Fire system certificate	
4.10.7	Davit annual inspection	Certificat for annual survey	
4.13.1	Electrical inspection	Report	
4.16.1	Annual inspection of heating, ventilation, air conditioning and refrigeration systems	Submit inspection and repair report	
4.18.1	Inspection of vessel radio	Radio checklist	

## **5. CCGS A. LEBLANC (A 028)**

Maintenance Manager: <b>Gaël Therrien</b>	Email: <b>gael.therrien@dfo-mpo.gc.ca</b>	Office: <b>418-648-6896</b> Cell: <b>418-931-1850</b>
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**Date of work: From contract award to March 18, 2015**

### **5.10. SAFETY AND SECURITY EQUIPMENT**

#### **5.10.1 ANNUAL INSPECTION OF RESCUE ZODIAC**

Have an authorized Zodiac representative complete the annual certification of the Zodiac lifeboat. Provide transportation.

Boat description:

Ribo 420: FRXBC210FB212

Serial no.: 234006

Date of manufacture: Feb. 2012

O/B motor M000TA5071

Motor serial no.: 6BC-81800-00

Provide the certificate and a full report on the inspection and repairs.

#### **5.10.2 FUEL HOSE CERTIFICATION**

Provide the material and labour required for conducting the verification and hydrostatic test of two Goodyear Flexsteel Futura fuel hoses, one that is 1 inch by 12 metres long and one that is 1 inch by 5 metres long.

The working pressure of the hoses is 2 bar.

Each hose must have a stainless steel plate indicating the test date, working pressure, test pressure, hose serial number, and Contractor's name.

The Contractor must provide the Chief Engineer and the technical authority with a certificate for each hose.

#### **5.10.3 INSPECTION OF ZODIAC HOIST HOOKS**

Have a manufacturer's representative conduct an annual certification of the release hooks on the Zodiacs. The crew will dismantle the hooks. Provide proof that this person is the hook manufacturer's representative.

List of hooks to be inspected:

- Two (2) Fast RSQ hooks, serial no. 0062

- NEM serial no.: 5786

The Contractor shall provide an inspection certificate and an inspection report for each hook. The vessel and the technical authority must receive this report.

#### 5.10.4 INSPECTION OF PORTABLE FIRE EXTINGUISHERS

##### 5.10.4.1 – SCOPE

The Contractor shall remove the fire extinguishers from the vessel and transport them to an authorized service centre, where maintenance and testing will be performed. They shall then be brought back to the vessel and reinstalled.

##### 5.10.4.2 – REFERENCES

###### Reference drawings/data plate information

List of types of vessel fire extinguishers to be inspected:

	Navigation bridge
	Main deck
	Below main deck
	Craft
	Additional

Station no.	Year of manufacture	Location	Brand & model	Type	Serial no.	Min. weight (kg)	Last 5/6-year maintenance	Last 5/12-year hydrostatic test
1	2012	Control centre	Amerex B456	ABC dry chemical	BG-284191	7.54	Jan. 2012	Jan. 2012
3	2013	Control centre	Amerex 311	CO2	AC-415119	15.1	Jan. 2013	Jan. 2013
4	2013	Wheelhouse	Amerex B456	ABC dry chemical	BU-121417	7.54	Jan. 2013	Jan. 2013
N/A	2013	Starboard battery compartment	Amerex B260	AK foam Sticker!!!	AD-369268	9.22	Jan. 2013	Jan. 2013
N/A	2012	Port side battery compartment	Amerex 252	AB foam	AC-790008	12.5	Jan. 2012	Jan. 2012
6	2013	Passageway food shop	Amerex 252	AB foam	AD-568099	12.5	Jan. 2013	Jan. 2013
8	2013	Galley	Amerex	AK-class B260	AD-369273	9.22	Jan. 2013	Jan. 2013

9	2013	Passageway CO, C/M	Amerex 252	AB foam Sticker!!	AD-568094	12.5	Jan. 2013	Jan. 2013
12	2013	Elec. equipment room	Amerex 331	CO2 BC	AC-415118	15.1	Jan. 2013	Jan. 2013
13	2013	Emergency generator	Amerex 331	CO2 BC	AC-415111	15.1	Jan. 2013	Jan. 2013
14	2011	Emergency generator	Amerex B456	ABC dry chemical	AT-437639	7.54	Jan. 2011	Jan. 2011
31	2013	Exterior starboard	Amerex B456	ABC dry chemical	BU-122131	7.54	Jan. 2013	Jan. 2013
15	2013	Steering gear	Amerex 252	AB foam	AD-568085	12.5	Jan. 2013	Jan. 2013
18	2013	Control room	Amerex B456	ABC dry chemical	BU-122134	7.54	Jan. 2013	Jan. 2013
20	2013	Bow thruster	Amerex 252	AB foam	AD-568090	12.5	Jan. 2013	Jan. 2013
21	2013	Passageway (toilets)	Amerex 252	AB foam	AD-568087	12.5	Jan. 2013	Jan. 2013
22	2013	Main port side E/R	Amerex 331	CO2 BC	AC-415001	15.8	Jan. 2013	Jan. 2013
23	2013	Main forward centre E/R	Amerex 252	AB foam	AD-568092	12.5	Jan. 2013	Jan. 2013
24	2013	Main starboard E/R	Amerex A411	ABC dry chemical	BT-764696	14.94	Jan. 2013	Jan. 2013
25	2013	Main centre aft E/R	Amerex 331	CO2 BC	AC-415120	15.8	Jan. 2013	Jan. 2013
26	2013	Main starboard E/R	Amerex 252	AB foam	AD-568086	12.5	Jan. 2013	Jan. 2013
28	2013	Aft auxiliary E/R	Amerex 252	AB foam	AD-568084	12.5	Jan. 2013	Jan. 2013
29	2013	Forward auxiliary E/R	Amerex 331	CO2 BC	AC-415109	15.8	Jan. 2013	Jan. 2013
30	2013	Passageway (C/R)	Amerex 252	AB foam	AD-568097	12.5	Jan. 2013	Jan. 2013
	2010	Craft	Pyrene	ABC dry chemical	AE-107727	3.72	Jan. 2010	Jan. 2010
	2010	Craft	Pyrene	ABC dry chemical	AE-107732	3.72	Jan. 2010	Jan. 2010
	2011	Zodiac Solas	Orfeo	ABC dry chemical	75894.001 18334	1	Sept. 2011	Sept. 2011
	2013	Immersion suits	Amerex B456	ABC dry chemical	BU-121547	7.54	Jan. 2013	Jan. 2013
	2013	Immersion suits	Amerex A411	ABC dry chemical	BT-764697	14.94	Jan. 2013	Jan. 2013

	2013	Immersion suits	Amerex 331	CO2 BC	AC-415121	15.8	Jan. 2013	Jan. 2013
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**Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

**5.10.4.3 – TECHNICAL DESCRIPTION**

**General**

- An annual inspection of portable fire extinguishers shall be performed. Fire extinguisher inspection and maintenance shall be entrusted to a qualified representative.
- The Contractor shall remove the fire extinguishers in a sequence such that the number of fire extinguishers off the vessel is never more than a third of those that are on board. The Chief Engineer will determine the order in which the fire extinguishers shall leave the vessel.
- The Contractor shall include the price of preventive maintenance and maintenance, hydrostatic testing, refilling, and annual inspection according to the information found in the table.

**Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

Once the maintenance has been completed, the Contractor shall return all the fire extinguishers to the vessel and put them back in place according to the Chief Engineer's instructions.

**Annual inspection**

The fire extinguishers must undergo a visual inspection at least once a year. This inspection involves turning the fire extinguishers upside down and shaking them, top down, in order to loosen the powder that they contain.

**Preventive maintenance/Maintenance**

Dry chemical extinguisher: Every 6 years Work completed: We replaced the dry chemical and made sure that the device was functioning properly. A verification collar and a WHMIS label indicating the maintenance date must be attached, in compliance with standard NFPA10 or a more recent standard.

Water extinguisher, Type K, Co2: Every 5 years

**Hydrostatic test**

This test involves confirming that the container is in good condition by subjecting it to a pressure determined by the manufacturer.

Dry chemical extinguisher: Every 12 years

Water extinguisher, Type K, Co2: Every 5 years

**Refill**

When a fire extinguisher has been used, even partially, it must be refilled immediately. Note that a refill is not considered to be preventive maintenance.

**5.10.4.4 – PROOF OF PERFORMANCE**

**Inspection**

All work must be completed to the satisfaction of the Commanding Officer, the Chief Engineer or the person responsible for the vessel's maintenance.

**Tests**

Fire extinguisher tests shall be performed in compliance with the regulations of the Lloyd classification society.

**Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

**5.10.4.5 – DELIVERABLES**

**Drawings/reports**

The Contractor shall provide the Chief Engineer with two (2) paper copies of reports and checklists that explain in detail the work and necessary modifications. The Contractor shall also send an electronic copy of all reports to the person responsible for the vessel's maintenance.

**5.10.5 FIRE DETECTION SYSTEM**

**5.10.5.1 – SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a licensed company to perform the annual inspection and certification of the fire detection system.

**5.10.5.2 – REFERENCES**

**Reference drawings/data plate information**

Integrated fire detection system – Instruction manual  
AF6095-55500-04\_AF FIRE CONTROL PLAN\_Fr  
Fire Notifier NFS-320 fire detection system

**Standards**

Fleet Safety and Security Manual (DFO 5737)

## **Regulations**

*Canada Shipping Act, 2001*

### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

### **5.10.5.3 – TECHNICAL DESCRIPTION**

#### **General**

- The vessel is equipped with a Techsol integrated fire detection system with a Fire Notifier NFS-320 panel. The Fire Notifier NFS-320 panel is connected to the integrated fire alarm system, which is part of the vessel's surveillance and alarm system.
- Before work begins, the Contractor shall arrange for a visit from a Lloyd Register classification society inspector.
- The Contractor shall retain the services of a licensed company to conduct the annual inspection and certification of the fire detection system.

#### **Location**

The fire detection system control panel is found on the port side of the wheelhouse.

#### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

### **5.10.5.4 – PROOF OF PERFORMANCE**

#### **Inspection**

All work shall be completed to the satisfaction of the Chief Engineer.

#### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of the maintenance and annual certification certificates along with the original. The Contractor shall also send an electronic copy of all reports and certificates to the person responsible for the vessel's maintenance.

### **5.10.5.5 – DELIVERABLES**

#### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of all reports and certificates to the person responsible for the vessel's maintenance.

## **5.10.6 ANNUAL INSPECTION OF FIXED FIRE SUPPRESSION SYSTEM**

### **5.10.6.1 – SCOPE**

- The purpose of this specification is to perform maintenance on and certify the fixed fire suppression system.
- The Contractor shall communicate with the Chief Engineer before undertaking the work for this item. This work shall be performed in conjunction with the portable

fire extinguisher maintenance without reducing the fire suppression capacity aboard the vessel.

- The fixed fire suppression system is an FM200.

#### **5.10.6.2 – REFERENCES**

##### **Reference drawings/data plate information**

FM 200 system

Galley fire suppression system

##### **Standards**

- The Contractor must be licensed to certify this system by the Lloyd Register classification society, which the Contractor shall do in accordance with the most recent marine safety regulations in force.
- The Contractor shall also comply with the International Safety Management Code standards for hot work, confined space entry, fall protection and lock-out procedures.

##### **Regulations**

*Canada Shipping Act, 2001*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **5.10.6.3 – TECHNICAL DESCRIPTION**

##### **General**

- The Contractor shall retain the services of an authorized representative who will test and inspect the FM200 system and the vessel's galley fire extinguishing system as part of the annual inspection and certification of this system. The Chief Engineer will be present at all tests.
- Aside from the following tests, the Contractor shall perform all tests required by the Lloyd Register inspector on site. In the estimate, the Contractor shall provide the cost of testing the alarms (indicator lights and sirens) on all devices, testing the nitrogen-releasing cylinders, testing ventilation closure devices, and testing slack loops and cables.
- The Contractor shall use air pressure to clean the pipes and pneumatic actuators and ensure that they work properly. The pipes and nozzles must be free of obstruction.
- The Contractor shall ensure that the alarm displays and sirens work properly. The Contractor shall weigh each cylinder and record the results. At the end of the refit, the Contractor shall provide the Chief Engineer with copies of all certificates.
- When the tests and inspections are completed, the Contractor shall reassemble and reactivate the systems.

##### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily

removing and storing them, and then reinstalling them on the vessel.

#### **5.10.6.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer, the person responsible for vessel maintenance and the Lloyd Register inspector.

##### **Tests**

The Chief Engineer must be present for the system inspection and test.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

#### **5.10.6.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

### **5.10.7 ANNUAL INSPECTION OF LIFEBOAT DAVIT**

#### **5.10.7.1 SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a company licensed by Wellind Lambie to perform the annual inspection and certification of the lifeboat's davit and its lifting device.

#### **5.10.7.2 REFERENCES**

##### **Reference drawings/data plate information**

Operations and Maintenance Manual 0851A03

##### **Regulations**

*Canada Shipping Act, 2001*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **5.10.7.3 TECHNICAL DESCRIPTION**

##### **General**

Supplier: Wellin Lambie LTD

Supplier ref: 7773/7  
Davit type: PIV1.0A  
Assy no: 5601-1701  
SWI: 1080 KG

The Contractor shall retain the services of a company licensed by the manufacture to conduct the annual inspection and certification of the davit and its integrated lifting device.

**Location**

The davit is located on the port side of the wheelhouse.

**Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

**5.10.7.4 PROOF OF PERFORMANCE**

**Inspection**

All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the Lloyd Register.

**Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

**5.10.7.5 DELIVERABLES**

**Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

## **5.11. HULL AND STRUCTURE**

N/A

## **5.12. PROPULSION AND MANOEUVRING SYSTEMS**

N/A

## **5.13. VESSEL'S GENERATION OF ELECTRICAL POWER**

### **5.13.1 VERIFICATION OF ELECTRICAL CONNECTION INTO POWER PANEL**

#### **5.13.1.1 SCOPE**

Di inspection of the tightening on each connector and terminal bloc into the main power panel and emergency power panel .

#### **5.13.1.2 REFERENCES**

##### **Reference drawings/data plate information**

See annex picture **Regulations**  
*Canada Shipping Act, 2001*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **5.13.1.3 TECHNICAL DESCRIPTION**

##### **General**

Proceed with the complete isolation of each power panel. Each panel must be isolated physically from the power source.

A minimum of power must keep on board for safety reason.  
The word must be coordinate with chief engineer.

The contractor must check all electrical connection on terminal block, cable fixation and contactor in each following panel:`

- Main switchboard (MCC and 600v distribution)
- Emergency switchboard
- 600 volt panel
- 120volt panel

All control and power cable must be checked.

The bolting on the main power bar must be checked and tight at the right torque corresponding at standard. A mark with a permanent pen must be done on each bolt that are verified.

For the bid purpose, supply an electrical specialist for period of (40) forty hours to execute the scope of work.

**Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

**5.13.1.4 PROOF OF PERFORMANCE**

**Inspection**

All work must be completed to the satisfaction of the Chief Engineer.

Supply a report with on irregular situation

**5.13.1.5 DELIVERABLES**

**Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance

**5.14. POWER DISTRIBUTION**

N/A

**5.15. AUXILIARY SYSTEMS**

N/A

**5.16. DOMESTIC SYSTEMS**

**5.16.1 ANNUAL INSPECTION OF HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION SYSTEMS**

**5.16.1.1 – SCOPE**

Perform the annual inspection of refrigeration systems.

**5.16.1.2 – REFERENCE**

**Reference drawings/data plate information**

*Inventory of refrigeration systems on the CCGS Caporal Kaoble*

### **Regulations**

*Canada Shipping Act, 2001*

*All work shall be completed in accordance with sections 2.7 and 2.8 of the Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems.*

### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

## **5.16.1.3 – TECHNICAL DESCRIPTION**

### **General**

- (2) Bronswerk compressor for refrigeration and freezing. Model 4177-050-001 1.5 KW with 10 pounds of refrigerant R404A.
- For air conditioning, we have one Bronswerk compressor model 4177-030-001 575 v 22.1 with 40 pounds of refrigerant R410A.
- Perform a full inspection of all heating, ventilation, air conditioning and refrigeration system components. All breaks and failures shall be addressed as additional work on form 1379.
- Change oil on all compressor
- Conduct a test to detect refrigerant leaks on all air conditioning and refrigeration system components.
- Inspect the accommodation fan motor that is showing signs of failure.
- Check the operating parameters.
- Provide the certificate and registration number from a valid refrigeration mechanic's certificate.
- The Contractor shall affix a label with its contact information to each piece of equipment, stating that the equipment has been inspected and tested.

### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

## **5.16.1.4 – PROOF OF PERFORMANCE**

### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer or the person responsible for the vessel's maintenance.

### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of inspection certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

## **5.16.1.5 – DELIVERABLES**

### **Drawings/reports**

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The Contractor shall provide the Chief Engineer with a paper copy of the report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

## 5.17. DECK EQUIPMENT/VESSEL SUPPORT SYSTEMS

N/A

## 5.18. COMMUNICATION AND NAVIGATION SYSTEMS

### 5.18.1 INSPECTION OF VESSEL RADIO

Provide a lump-sum price for inspecting the vessel's radio. The price shall include the cost of transportation, and housing and living expenses. Provide a fee schedule in case there is additional work.

Provide material and labour for inspecting the radio so that a checklist can be supplied for obtaining a radio inspection certificate from the Lloyd Register classification society. The zones covered must be for the Canadian coastlines and the Great Lakes Basin, in accordance with the *Ship Station (Radio) Technical Regulations, 1999*.

The radio checklist is to be given to the crew and an electronic copy sent to the technical authority.

The Contractor shall provide proof that Lloyd Register has authorized the Contractor to do the work.

## 5.19. INTEGRATED CONTROL SYSTEMS

N/A

### CERTIFICATES AND REPORTS: CCGS A. Leblanc

Deliverable tracking table

Reference	Description	Deliverable document	Date received
5.10.1	Annual inspection of rescue Zodiac	Inspection certificate and report	
5.10.2	Fuel hose certification	Fuel hose certificate	
5.10.3	Inspection of Zodiac hoist hooks	Inspection certificate	
5.10.4	Fire system inspection	Fire system certificate	
5.10.5	Fire detection system	Certificate for fire detection system	
5.10.6	Annual inspection of fixed fire suppression system	Fire system certificate	

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5.10.7	Davit annual inspection	Certificate for annual survey	
5.13.1	Electrical inspection	Report	
5.16.1	Annual inspection of heating, ventilation, air conditioning and refrigeration systems	Submit inspection and repair report	
5.18.1	Inspection of vessel radio	Radio checklist	

## **6. CCGS LEIM (L 023)**

Maintenance Manager: <b>Alexandre Gouin</b>	Email: <b>alexandre.gouin@dfo-mpo.gc.ca</b>	Office: <b>418-648-5763</b> Cell: <b>418-931-4215</b>
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**Date of work: From February 2 to February 27, 2015, and from March 25 to March 31, 2015**

Some work will be done in February and some in March, depending on the scope of the work. This information will be confirmed at the meeting prior to the refit.

### **6.10. SAFETY AND SECURITY EQUIPMENT**

#### **6.10.1 PORTABLE FIRE EXTINGUISHER**

##### **6.10.1.1 – SCOPE**

The Contractor shall remove the fire extinguishers from the vessel and transport them to an authorized service centre, where maintenance and testing will be performed. They shall then be brought back to the vessel and reinstalled. If possible, the authorized representative will perform the inspection directly on the vessel.

##### **6.10.1.2 – REFERENCES**

###### **Reference drawings/data plate information**

- See the list of fire extinguishers aboard the vessel in the technical description.
- ISV22 – 30000RMM13 – Drawing of general layout

###### **Equipment provided by owner**

- Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

##### **6.10.1.3 – TECHNICAL DESCRIPTION**

###### **General**

- An annual inspection of portable fire extinguishers shall be performed. Fire extinguisher inspection and maintenance shall be entrusted to a qualified representative.
- The Contractor shall remove the fire extinguishers in a sequence such that the number of fire extinguishers off the vessel is never more than a third of those that are on board. The Chief Engineer will determine the order in which the fire extinguishers shall leave the vessel.
- Once the maintenance has been completed, the Contractor shall return all the fire extinguishers to the vessel and put them back in place according to the Chief Engineer's instructions.

**Location**

- List of types of vessel fire extinguishers:

No.	LOCATION	CABLE	SERIAL No.	DATE OF MANUF.	6 YEARS SCHEDULED	HYDRO SCHEDULED	CAPACITY
1	Wheelhouse	CO2					10 lbs
2	Mess	CO2					10 lbs
3	Galley	CO2					10 lbs
4	Lower accommodations	Foam					9 L
5	Sec. lab.	Dry chemical					10 lbs
6	Engine room, forward centre	CO2					10 lbs
7	Engine room, forward port side	Foam					9 L
8	Engine room, aft port side	Foam					9 L
9	Workshop	Dry chemical					10 lbs
10	Auxiliary engine room	Dry chemical					10 lbs
SP	Safety cabinet	Dry chemical					10 lbs
SP	Zodiac	Dry chemical					2.5 lbs

- The above table shall be completed by the contractor.

**Obstructions**

- The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

**6.10.1.4 – PROOF OF PERFORMANCE**

**Inspection**

- All work must be completed to the satisfaction of the Commanding Officer, the Chief Engineer or the person responsible for the vessel's maintenance.

### **Tests**

- Fire extinguisher tests shall be performed in compliance with the regulations of the Bureau Veritas classification society.

### **Certification**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

### **6.10.1.5 – DELIVERABLES**

#### **Drawings/reports**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of reports and checklists that explain in detail the work and necessary modifications. The Contractor shall also send an electronic copy of all reports to the person responsible for the vessel's maintenance.

## **6.10.2 FIRE DETECTION SYSTEM**

### **6.10.2.1 – SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a licensed company to perform the annual inspection and certification of the fire detection system.

### **6.10.2.2 – REFERENCES**

#### **Reference drawings/data plate information**

- Integrated fire detection system – Instruction manual
- ISV22-36000RMM7 – Fire safety plan
- Notifier NFS2-640

#### **Standards**

- Fleet Safety and Security Manual (DFO 5737)

#### **Regulations**

- *Canada Shipping Act, 2001*

#### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

### **6.10.2.3 – TECHNICAL DESCRIPTION**

#### **General**

- The vessel is equipped with a Techsol integrated fire detection system with a Notifier NFS2-640 fire alarm. The Notifier NFS-640 panel is connected to the integrated fire alarm system, which is part of the vessel's surveillance and alarm system.
- Before work begins, the Contractor shall arrange for a visit from a Bureau Veritas classification society inspector.
- The Contractor shall retain the services of a licensed company to conduct the annual inspection and certification of the fire detection system.

**Location**

The fire detection system control panel is found on the port side of the wheelhouse.

**Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

**6.10.2.4 – PROOF OF PERFORMANCE**

**Inspection**

- All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the PWGSC inspector.

**Certification**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

**6.10.2.5 – DELIVERABLES**

**Drawings/reports**

- The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

**6.10.3 ANNUAL INSPECTION OF FIXED FIRE SUPPRESSION SYSTEM**

**6.10.3.1 – SCOPE**

- The purpose of this specification is to perform maintenance on and certify the fixed fire suppression system on the CCGS Leim.
- The Contractor shall communicate with the Chief Engineer before undertaking the work for this item. This work shall be performed in conjunction with the portable fire extinguisher maintenance without reducing the fire suppression capacity aboard the vessel.
- The fixed fire suppression system is a 3M Novec 1230 system.

**6.10.3.2 – REFERENCES**

**Reference drawings/data plate information**

Novec ISV 22M system

**Standards**

- The Contractor must be licensed to recertify this system, which the Contractor shall do in accordance with the most recent rules from the Classification Society BV.
- The Contractor shall also comply with the International Safety Management Code standards for hot work, confined space entry, fall protection and lock-out procedures.

**Regulations**

- *Canada Shipping Act, 2001*

**Equipment provided by owner**

- Unless otherwise indicated, the Contractor shall provide all the material, equipment and

parts necessary for performing the work in the specifications.

### **6.10.3.3 – TECHNICAL DESCRIPTION**

#### **General**

- The Contractor shall retain the services of an authorized representative who will test and inspect the vessel's Novec 1230 system as part of the annual inspection and certification of this system. The Chief Engineer will be present at all tests.
- Aside from the following tests, the Contractor shall perform all tests required by the Bureau Veritas inspector on site. In the estimate, the Contractor shall provide the cost of testing the alarms (indicator lights and sirens) on all devices, testing the nitrogen-releasing cylinders, testing ventilation closure devices, and testing slack loops and cables.
- The Contractor shall use air pressure to clean the pipes and pneumatic actuators and ensure that they work properly. The pipes and nozzles must be free of obstruction.
- The Contractor shall ensure that the alarm displays and sirens work properly. The Contractor shall weigh each cylinder and record the results. At the end of the refit, the Contractor shall provide the Chief Engineer with copies of all certificates.
- When the tests and inspections are completed, the Contractor shall reassemble and reactivate the systems.

#### **Location**

- The Novec fire extinguishers are found in the cargo hold.

#### **Obstructions**

- The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

### **6.10.3.4 – PROOF OF PERFORMANCE**

#### **Inspection**

- All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the Bureau Veritas inspector.

#### **Tests**

- The Chief Engineer must be present for the system inspection and test.

#### **Certification**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

### **6.10.3.5 – DELIVERABLES**

#### **Drawings/reports**

- The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

#### **6.10.4 ANNUAL INSPECTION OF RESCUE BOAT DAVIT**

##### **6.10.4.1 – SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a company licensed by Global Davit to perform the annual inspection and certification of the lifeboat's davit and its lifting device.

##### **6.10.4.2 – REFERENCES**

###### **Reference drawings/data plate information**

Operations and Maintenance Manual 0851A03

###### **Regulations**

*Canada Shipping Act, 2001*

###### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

##### **6.10.4.3 – TECHNICAL DESCRIPTION**

###### **General**

The davit is a Global Davit GmbH.

Type: Rhs.13/3.5

The Contractor shall retain the services of a company licensed by Global Davit to conduct the annual inspection and certification of the davit and its integrated lifting device.

Inspect the 4-inch clearance when the davit pivots.

###### **Location**

The davit is located on the port side of the wheelhouse.

###### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

##### **6.10.4.4 – PROOF OF PERFORMANCE**

###### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the Bureau Veritas inspector.

###### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

##### **6.10.4.5 – DELIVERABLES**

###### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

## **6.11. HULL AND STRUCTURE**

N/A

## **6.12. PROPULSION AND MANOEUVRING SYSTEMS**

N/A

## **6.13. VESSEL'S GENERATION OF ELECTRICAL POWER**

N/A

## **6.14. POWER DISTRIBUTION**

### **6.14.1 ELECTRICAL WORK**

#### **6.14.1.1 – SCOPE**

Repairs of intermittent electrical problems.

#### **6.14.1.2 – REFERENCE**

##### **Reference drawings/data plate information**

*ISV22-61850RMM2 – 120VAC & 24VDC distribution plan*

*ISV22-60000MM21 – Electrical one line diagram*

##### **Regulations**

*Canada Shipping Act, 2001*

*Ships Electrical Standards TP 127*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **6.14.1.3 – TECHNICAL DESCRIPTION**

##### **General**

- Investigate a grounding problem on the DC1, DC2 and DC4 panels and complete any necessary repair work.
- Investigate and repair an electrical grounding problem on the bow thruster. The fuse repeatedly burns out on the 24 VDC circuit. Also investigate the following error on the control: "VDF inverted fault."
- The work must be done by a qualified electrician in compliance with the TP127 requirements. Schedule 20hrs to do the job.

##### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

#### **6.14.1.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer or the person responsible for the vessel's maintenance.

#### **6.14.1.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

### **6.15. AUXILIARY SYSTEMS**

#### **6.15.1 STERN TUBE AND STEERING GEAR COOLING PUMP**

##### **6.15.1.1 – SCOPE**

Do the design, calculations and installation of a flexible coupling on the two cooling pumps driven by the main engines. Each engine has got its own dedicated pump.

##### **6.15.1.2 – REFERENCE**

###### **Reference drawings/data plate information**

*735.2 – Pump stern tube – specifications*

*ISV22-73500RMM11 – Cooling water system diagram*

*Photos IMG 1644–1645 – 1648–1647*

###### **Regulations**

*Canada Shipping Act, 2001*

*Bureau Veritas, Classification Society's Regulations*

###### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

##### **6.15.1.3 – TECHNICAL DESCRIPTION**

###### **General**

- Install a flexible Lovejoy coupling on the intermediate drive shaft of each pump.
- Two new, highly resistant intermediate shafts with an integrated flexible coupling must be manufactured.
- An adaptor must be manufactured to connect each pump housing to the engine.

###### **Locations**

The two pumps are attached to each of the main engines.

###### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

##### **6.15.1.4 – PROOF OF PERFORMANCE**

###### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer or the person responsible for the vessel's maintenance.

#### **Tests**

The Chief Engineer must be present when the pumps are tested.

#### **6.15.1.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall use AutoCAD to make a manufacturing drawing of the shafts, couplings and adaptors. This drawing must be approved by the person responsible for the vessel's maintenance.

## **6.16. DOMESTIC SYSTEMS**

### **6.16.1 ANNUAL INSPECTION OF HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION SYSTEMS**

#### **6.16.1.1 – SCOPE**

Perform annual inspection of refrigeration systems.

#### **6.16.1.2 – REFERENCE**

##### **Reference drawings/data plate information**

*Inventory of refrigeration systems on the CCGS Leim*

##### **Regulations**

*Canada Shipping Act, 2001*

*All work shall be completed in accordance with sections 2.7 and 2.8 of the Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems.*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

#### **6.16.1.3 – TECHNICAL DESCRIPTION**

##### **General**

- Perform a full inspection of all heating, ventilation, air conditioning and refrigeration system components. All breaks and failures shall be addressed as additional work on form 1379.
- Conduct a test to detect refrigerant leaks on all air conditioning and refrigeration system components.
- Inspect the accommodation fan motor that is showing signs of failure.
- Check the causes of air loss from the secondary laboratory hood.
- Check the operating parameters.
- At the Chief Engineer's request, the refrigeration technician must present a valid refrigeration mechanic's certificate.
- The Contractor shall affix a label with its contact information to each piece of

equipment, stating that the equipment has been inspected and tested.

### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

#### **6.16.1.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer or the person responsible for the vessel's maintenance.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of inspection certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

#### **6.16.1.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

## **6.17. DECK EQUIPMENT/VESSEL SUPPORT SYSTEMS**

### **6.17.1 CORRECTIVE MAINTENANCE OF STEERING GEAR HYDRAULIC SYSTEMS**

#### **6.17.1.1 – SCOPE**

- Provide the services of a local Kobelt-authorized representative for inspecting and cleaning the hydraulic systems of the two steering gear units.

#### **6.17.1.2 – REFERENCE**

##### **Reference drawings/data plate information**

*905.4 – Steering gear – Installation and operation manual*

##### **Regulations**

*Canada Shipping Act, 2001*

*Bureau Veritas, Classification Society's Regulations*

##### **Authorized representative**

*Hydraunav*

*Contact: Bertrand Huot, 418-681-5895*

##### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

### **6.17.1.3 – TECHNICAL DESCRIPTION**

#### **General**

- Provide the services of a Kobelt (Hydraunav) authorized representative to do the following work:
- Inspect the two systems in order to detect any failure or anomaly.
- Install two (2) sample valves. The CCG will supply the valves.
- Guide the Chief Engineer in the taking of four samples.
- Install new filtration cartridges (3 microns) in the Duplex high-pressure filter. The CCG will supply the cartridges.
- Open the by-passes on the jacks and put the systems back into circulation for a period to be determined by Hydronav. The purpose of this step is to filter the oil through the newly installed cartridges.
- After cleaning, inspect the cartridges and guide the Chief Engineer in the taking of four new samples.

#### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

### **6.17.1.4 – PROOF OF PERFORMANCE**

#### **Inspection**

All work must be completed to the satisfaction of the Chief Engineer or the person responsible for the vessel's maintenance.

#### **Tests**

The Chief Engineer must be present when the two steering gear units are tested.

### **6.17.1.5 – DELIVERABLES**

#### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

## **6.18. COMMUNICATION AND NAVIGATION SYSTEMS**

### **6.18.1 RADIO INSPECTION**

#### **6.18.1.1 – SCOPE**

Perform the annual radio inspection.

#### **6.18.1.2 – REFERENCE**

**Reference drawings/data plate information**

### **Regulations**

*Ship Station (Radio) Technical Regulations, 1999, CSA*  
*Bureau Veritas, Classification Society's Regulations*

### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

### **6.18.1.3 – TECHNICAL DESCRIPTION**

#### **General**

- Perform a complete radio inspection in accordance with Bureau Veritas requirements.

#### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

### **6.18.1.4 – PROOF OF PERFORMANCE**

#### **Inspection**

All work must be completed to the satisfaction of the Commanding Officer or the person responsible for the vessel's maintenance.

#### **Tests**

Annual RLS 406 MHz tests

#### **Certification**

The Contractor shall provide the following certificates:

- Renewal of cargo ship safety radio certificate (Bureau Veritas) – Periodical survey report for issuance
- Certificat AIS / AIS certificate
- Certificat RLS / EPIRB certificate
- Certificat TRS / SART certificate

The Contractor shall provide the Commanding Officer with two (2) paper copies of inspection certificates along with the original. The Contractor shall also send an electronic copy of certificates to the person responsible for the vessel's maintenance.

### **6.18.1.5 – DELIVERABLES**

#### **Drawings/reports**

The Contractor shall provide the Chief Engineer with a paper copy of the service report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of the report to the person responsible for the vessel's maintenance.

## **6.19. INTEGRATED CONTROL SYSTEMS**

N/A

## 7. CCGS ÎLE SAINT-OURS (I 002)

Maintenance Manager: <b>Gaël Therrien</b>	Email: <b>gael.therrien@dfo-mpo.gc.ca</b>	Office: <b>418-648-6896</b> Cell: <b>418-931-1850</b>
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**Date of work: From contract award to April 15, 2015**

### 7.10. SAFETY AND SECURITY EQUIPMENT

#### 7.10.1 AFT PORT SIDE FIRE PUMP

- Pump brand: Viking
- Pump model: 1-2½ 660
- a. Completely overhaul the fire pump. Padlock the pump motor power breaker. Disconnect the pump and its motor to take them to the workshop. Take the necessary measures to protect the pipes and electrical installations during the overhaul.
- b. Take the pump wear measurements. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.
- c. Check the condition of the motor bearings. Use a jet of compressed air to clean the motor winding. Perform a complete insulation test (Megger test) on the motor winding and mount. Replace defective parts with new parts.
- d. Reassemble the pump and its motor with the new or reconditioned parts, install them in their proper place and reconnect them to their piping with the new fittings. Align the pump and its motor. Perform tests to demonstrate that the pump works properly once it is back in place.
- e. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- f. All replaced parts shall be given back to the CCG representative.
- g. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.

#### 7.10.2 FORWARD PORT SIDE BILGE PUMP

- Pump brand: Viking
- Pump model: 1-2½ 660
- a. Completely overhaul the port-side bilge pump. Padlock the pump motor power breaker. Disconnect the pump and its motor to take them to the workshop. Take the necessary measures to protect the pipes and electrical installations during the overhaul.
- b. Take the pump wear measurements. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.

- c. Check the condition of the motor bearings. Use a jet of compressed air to clean the motor winding. Perform a complete insulation test (Megger test) on the motor winding and mount. Replace defective parts with new parts.
- d. Reassemble the pump and its motor with the new parts, install them in their proper place and reconnect them to their piping with the new fittings. Align the pump and its motor. Perform tests to demonstrate that the pump works properly once it is back in place.
- e. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- f. All replaced parts shall be given back to the CCG representative.
- g. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.

### **7.10.3 WATER CANNON PUMP**

- Pump brand: Iron A/S Copenhagen
  - Pump model: QH-5 / 300
- a. Completely overhaul the water cannon pump. Padlock the supply valve on the pump hydraulic motor. Disconnect the pump and its motor to take them to the workshop. Take the necessary measures to protect the pipes and electrical installations during the overhaul.
  - b. Take the pump wear measurements. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.
  - c. Check the condition of the motor bearings. Take the motor wear measurements. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.
  - d. Reassemble the pump and its motor with the new parts, install them in their proper place and reconnect them to their piping with the new fittings. Align the pump and its motor. Perform tests to demonstrate that the pump works properly once it is back in place.
  - e. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
  - f. All replaced parts shall be given back to the CCG representative.
  - g. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.

## 7.10.4 FIRE EXTINGUISHER AND FIXED FIRE SUPPRESSION SYSTEM CERTIFICATION

- a. Complete the annual certification of the fire extinguishers and fixed fire suppression system in accordance with the *Canada Shipping Act* and standard NFPA 10.
- b. Table of fire extinguishers to be certified for the St-Ours

#	Location	Extinguisher model	Last TEST	Next TEST
1	Wheelhouse	5 lbs CO2	2011	2016
2	Wheelhouse	5 lbs CO2	2011	2016
3	Galley	1.6 Gls K	2010	2015
4	Passage	10 lbs ABC	2009	2021
5	Room 1	5 lbs ABC	2009	2021
6	Room 2	5 lbs ABC	2009	2021
7	Workshop	5 lbs ABC	2009	2021
8	Engine room	5 lbs ABC	2011	2016
9	Engine room	10 lbs ABC	2009	2021
10	Engine room	10 lbs ABC	2009	2021
11	Engine room	5 lbs CO2	2011	2016
12	Engine room	5 lbs CO2	2011	2016
13	Engine room	5 lbs ABC	2010	2022
14	Forward hold	10 lbs ABC	2011	2017
15	Forward hold	10 lbs ABC	2013	2025
	Spare, forward hold	10 lbs ABC	2011	2023
	Spare, forward hold	10 lbs ABC	2011	2021
	Spare, forward hold	10 lbs ABC	2013	2019

Check and weigh the fire extinguishers to determine their weight.

- c. The fixed system includes two 75 lb cylinders of CO2 for the engine room and one 100 lb cylinder of CO2 for the forward hold. When working on the fixed systems, also check the release cables, pressure switches, heat and smoke detectors, and alarms. All the distribution lines and flexible hoses shall be visually checked and cleared with compressed air. Check the remote-control and release mechanisms.
- d. Provide two (2) paper copies and one electronic copy of all inspection certificates and reports, including the verification certificates for the smoke and heat detectors on each vessels.

## 7.11. HULL AND RELATED STRUCTURE

### 7.11.1 LEAKS ON THE WHEELHOUSE ROOF

- a. Find and seal off leaks on the wheelhouse ceiling. Leaks only occur when it rains heavily, so to find them, the Contractor will have to use a water hose or fire hose with a strong flow. The leaks come from grommets, the magnetic compass tube and the rudder position indicator.

- b. Once the leaks are found, prepare the surfaces to allow for proper adhesion of the caulking compound. Seal off the leaks using Sikaflex-295 UV or a similar product. Once the leaks are sealed, redo the test with a strong flow of water to ensure that all leaks have been found and sealed.
- c. For bid purposes, calculate 32 man/hours for this work.

### **7.11.2 ENGINE ROOM EMERGENCY EXIT DOOR**

- d. Replace the seal on the exit with a new one made of similar material.
- e. Adjust the door's closing mechanism. The mechanism must be easy to operate and make the exit water-tight once it is in the closed position.
- f. Demonstrate the exit's watertightness using a strong water flow.
- g. For bid purposes, calculate 8 man/hours for this work.

## **7.12. PROPULSION AND MANOEUVRING SYSTEMS**

### **7.12.1 STARBOARD AND PORT SIDE PROPULSION REDUCERS**

- Reducer brand: Pay and Brinck
- Reducer model: PB130 left and right
- a. Do a cursory inspection and change the oil in the starboard and port side propulsion reducers. The inspection shall be done according to the inspection covers as specified by the manufacturer. The Contractor is responsible for properly protecting the inspection windows once their covers have been removed for the duration of the work on the reducers.
- b. Take wear measurements of the clutch plates. Take the gear backlash. Include the measurements taken in the reducer report. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new or reconditioned OEM parts as per the agreement with the CCG representative.
- c. Close the inspection covers with new fittings.
- d. Replace the oil on the two reducers with the oil recommended by the manufacturer. The Contractor is responsible for providing the new oil for the oil change and for disposing of the used oil in compliance with the laws and regulations in force.
- e. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- f. All replaced parts shall be given back to the CCG representative.
- g. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.

### **7.12.2 SALT WATER PUMP IN THE STARBOARD PROPULSION ENGINE (DETROIT DIESEL SERIES 92, MODEL 8082-7000)**

- a. Replace the seal on the shaft of the salt water pump in the starboard propulsion engine. Use OEM parts only. Comply with the manufacturer's recommendations when performing the work.

- b. Perform a test with the engine running to demonstrate the pump shaft's watertightness.
- c. Work have to be done from an recognised Detroit Diesel technician

### **7.12.3 INDICATOR DIALS IN THE WHEELHOUSE (P-OIL PORT SIDE PROPULSION ENGINE AND STARBOARD REDUCER)**

- a. Repair the indicator dials in the wheelhouse for the port side propulsion engine oil pressure and the starboard reducer oil temperature. For bid purposes, calculate 8 hours for this work.
- b. Replace all defective parts with new or reconditioned OEM parts as per the agreement with the CCG representative.
- c. Perform a test with the propulsion engines running to ensure that the indicator dials are functioning normally.

### **7.12.4 STARBOARD STERN TUBE**

- a. Replace the starboard stern tube split seal with a new one (Wartsila H71475/1). The new split seal shall be provided by the Contractor.
- b. Follow the manufacturer's instructions for replacing the split seal. (Remember to inflate the balloon before withdrawing the split seal and to deflate it before turning the shaft).
- c. Once the work is completed, the Contractor shall demonstrate the watertightness of the split seal when the shaft is immobile and when it is moving.
- d. After work a 2 hours sea trial must be done
- e. Provide a report of work completed.

## **7.13. VESSEL'S GENERATION OF ELECTRICAL POWER**

### **7.13.1 PORT SIDE ALTERNATOR CLEANING AND INSULATION TEST**

- Alternator brand: Standford
- Alternator model: MCS 234C 43.75KVA 240V 3P
- a. Padlock the power breaker and starting valve of the port side alternator engine.
- b. Perform an insulation test (Megger test) on the alternator prior to cleaning. Disconnect the voltage regulator, taking care to mark the wires (the voltage regulator must not be connected to the exciter). Perform the insulation tests between the four windings and the frame.
- c. Open the alternator access doors. Clean all alternator windings with compressed air. Do not use solvent to clean them.
- d. Test all exciter diodes to ensure that they work properly.
- e. After cleaning, close the alternator access doors and redo the insulation test on the alternator (Megger test). Ensure that the voltage regulator is fully disconnected. Perform the insulation tests between the four windings and the frame.
- f. Once the insulation tests are complete, reconnect the voltage regulator. Close the alternator access doors. Remove the lock on the power breaker and starting valve of the alternator engine.

- g. In the presence of the CCG representative, start the alternator engine following the steps in the relevant procedure. Test that the alternator works properly by charging it for one hour. Ensure that the charge on the alternator does not exceed its capacity.
- h. Take the alternator temperature readings using an infrared thermometer and record them. Take a minimum of five readings, one at the front of the alternator, three in the centre, and one at the back.
- i. The insulation tests and tests must be done in the presence and to the complete of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- j. A report shall be produced containing the readings from the insulation tests before and after cleaning, the diode test, the temperature readings and any other relevant comments on the wear or general condition of the alternator.
- k. Must be done by a certified electrician.

### **7.13.2 STARBOARD ALTERNATOR CLEANING AND INSULATION TEST**

- Alternator brand: Standford
- Alternator model: MCS 234C 43.75KVA 240V 3P
- a. Padlock the power breaker and starting valve of the starboard alternator engine.
- b. Perform an insulation test (Megger test) on the alternator prior to cleaning. Disconnect the voltage regulator, taking care to mark the wires (the voltage regulator must not be connected to the exciter). Perform the insulation tests between the four windings and the frame.
- c. Open the alternator access doors. Clean all alternator windings with compressed air. Do not use solvent to clean them.
- d. Test all exciter diodes to ensure that they work properly.
- e. After cleaning, close the alternator access doors and redo the insulation test on the alternator (Megger test). Ensure that the voltage regulator is fully disconnected. Perform the insulation tests between the four windings and the frame.
- f. Once the insulation tests are complete, reconnect the voltage regulator. Close the alternator access doors. Remove the lock on the power breaker and starting valve of the alternator engine.
- g. In the presence of the CCG representative, start the alternator engine following the steps in the relevant procedure. Test that the alternator works properly by charging it for one hour. Ensure that the charge on the alternator does not exceed its capacity.
- h. Take the alternator temperature readings using an infrared thermometer and record them. Take a minimum of five readings, one at the front of the alternator, three in the centre, and one at the back.
- i. The insulation tests and tests must be done in the presence and to the complete of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- j. A report shall be produced containing the readings from the insulation tests before and after cleaning, the diode test, the temperature readings and any other relevant comments on the wear or general condition of the alternator.

- k. Must be done by a certified electrician.

## **7.14. AUXILIARY SYSTEMS**

N/A

## **7.15. AUXILIARY SYSTEMS**

### **7.15.1 FUEL TRANSFER PUMP**

- Pump brand: Rotoking
- Pump model: K4124A
- a. Completely overhaul the fuel transfer pump. Padlock the pump motor power breaker. Disconnect the pump and its motor to take them to the workshop. Take the necessary measures to protect the pipes and electrical installations during the overhaul.
- b. Take the pump wear measurements. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.
- c. Check the condition of the motor bearings. Use a jet of compressed air to clean the motor winding. Perform a complete insulation test (Megger test) on the motor winding and mount. Replace defective parts with new parts.
- d. Reassemble the pump and its motor with the new parts, install them in their proper place and reconnect them to their piping with the new fittings. Align the pump and its motor. Perform tests to demonstrate that the pump works properly once it is back in place.
- e. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- f. All replaced parts shall be given back to the CCG representative.
- g. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.

### **7.15.2 FORWARD STARBOARD AIR COMPRESSOR**

- Compressor brand: Hamworthy
- Compressor model: 2534 Type C35 No 05.4238
- a. Completely overhaul the starboard air compressor. Disconnect the compressor and its motor to take them to the workshop. Take the necessary measures to protect the pipes and electrical installations during the overhaul.
- b. Take wear measurements of the crankshaft and its bearings. Change the non-return valves and the fluid seals on the compressor head for all stages. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.

- c. Replace the compressor oil with the oil recommended by the manufacturer. The Contractor is responsible for providing the new oil for the oil change and for disposing of the used oil in compliance with the laws and regulations in force.
- d. Check the condition of the motor bearings. Use a jet of compressed air to clean the motor winding. Perform a complete insulation test (Megger test) on the motor winding and mount. Replace defective parts with new parts.
- e. Reassemble the compressor and its motor with the new parts, install them in their place and reconnect them to their piping with new fittings. Perform tests to demonstrate that the compressor works properly once it is back in place.
- f. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
- g. All replaced parts shall be given back to the CCG representative.
- h. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.

### **7.15.3 FORWARD HOLD HYDRAULIC PUMP**

- Pump brand: RHL
  - Pump model: A560
- a. Completely overhaul the hydraulic pump in the forward hold. Padlock the supply valve on the pump motor's starting air. Disconnect it to take it to the workshop. Take the necessary measures to protect the pipes during the overhaul.
  - b. Take the pump wear measurements. Identify parts that do not comply with the manufacturer's specifications or that show abnormal signs of wear, and give the details to the CCG representative. Replace these parts with new OEM parts.
  - c. Replace the pump's flexible oil feed pipes with new ones.
  - d. Reassemble the pump and its motor with the new parts, install them in their proper place and reconnect them to their piping with the new fittings. Align the pump and its motor. Perform tests to demonstrate that the pump works properly once it is back in place.
  - e. The internal inspection and tests shall be done in the presence and to the complete satisfaction of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.
  - f. All replaced parts shall be given back to the CCG representative.
  - g. A report shall be produced outlining the measurements taken, the parts changed and the alignment between the pump and its motor, and containing any other relevant comments on the wear or general condition of the pump.
  - h. Components operability check

### **7.15.4 INDICATOR DIALS IN THE WHEELHOUSE (P-OIL #2 GENERATOR)**

- a. Repair the oil pressure indicator dial in the wheelhouse for the #2 generator. For bid purposes, calculate 8 man/hours for this work.
- b. Replace all defective parts with new OEM parts.
- c. Perform a test to ensure that the indicator dials are functioning normally.

## **7.16. DOMESTIC SYSTEMS**

N/A

## **7.17. DECK EQUIPMENT/VESSEL SUPPORT SYSTEMS**

N/A

## **7.18. COMMUNICATION AND NAVIGATION SYSTEMS**

N/A

## **7.19. INTEGRATED CONTROL SYSTEMS**

N/A

### **CERTIFICATES AND REPORTS: CCGS ÎLE SAINT-OURS**

7.10.1 Report for fire pump.

7.10.2 Report for port side bilge pump.

7.10.3 Report for water cannon.

7.15.1 Report for fuel transfer pump.

7.12.1 Report for reducers.

7.13.2 Report for the two alternators.

7.15.1 Report for fuel transfer pump.

7.15.2 Report for compressor.

7.15.3 Report for hydraulic pump in the forward hold.

## 8. CCGS GARDE-CÔTE 03 (C 035)

Maintenance Manager: <b>Gaël Therrien</b>	Email: <b>gael.therrien@dfo-mpo.gc.ca</b>	Office: <b>418-648-6896</b> Cell: <b>418-931-1850</b>
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**Date of work: From contract award to April 2, 2015**

### 8.10. SAFETY AND SECURITY EQUIPMENT

#### 8.10.1 PORTABLE FIRE EXTINGUISHERS

##### 8.10.1.1 - SCOPE

The Contractor shall remove the fire extinguishers from the vessel and transport them to an authorized service centre, where maintenance and testing will be performed. They shall then be brought back to the vessel and reinstalled. If possible, the authorized representative will perform the inspection directly on the vessel.

##### 8.10.1.2 – REFERENCES

###### Reference drawings/data plate information

- See the list of fire extinguishers aboard the vessel in the technical description.

###### Equipment provided by owner

- Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

##### 8.10.1.3 – TECHNICAL DESCRIPTION

###### General

- An annual inspection of portable fire extinguishers shall be performed. Fire extinguisher inspection and maintenance shall be entrusted to a qualified representative.
- Once the maintenance has been completed, the Contractor shall return all the fire extinguishers to the vessel and put them back in place according to the Chief Engineer's instructions.

###### Location

- List of types of vessel fire extinguishers:

No.	LOCATION	CABLE	SERIAL NUMBER	DATE OF MANU F.	6 YEARS SCHED ULED	HYDRO SCHED ULED	CAPACITY
1	Forward starboard	ABC					10 lbs
2	Forward port side	ABC					10 lbs
3	Deck	CO2					50 lbs
4	Wheelhouse	ABC					10 lbs

5	Starboard engine room	ABC					10 lbs
6	Port side engine room	ABC					10 lbs

**Obstructions**

- The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

**8.10.1.4 – PROOF OF PERFORMANCE**

**Inspection**

- All work must be completed to the satisfaction of the Commanding Officer, the Chief Engineer or the person responsible for the vessel's maintenance.

**Tests**

- Fire extinguisher tests shall be performed in compliance with the regulations of the Bureau Veritas classification society.

**Certification**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

**8.10.1.5 – DELIVERABLES**

**Drawings/reports**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of reports and checklists that explain in detail the work and necessary modifications. The Contractor shall also send an electronic copy of all reports to the person responsible for the vessel's maintenance.

**8.10.2 FIRE DETECTION SYSTEM**

**8.10.2.1 – SCOPE**

The purpose of this specification is to ensure that the Contractor retains the services of a licensed company to perform the annual inspection and certification of the fire detection system.

**8.10.2.2 – REFERENCES**

**Reference drawings/data plate information**

- Integrated fire detection system – Instruction manual

**Standards**

- Fleet Safety and Security Manual (DFO 5737)

### **Regulations**

- *Canada Shipping Act, 2001*

### **Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

### **8.10.2.3 – TECHNICAL DESCRIPTION**

#### **General**

- The vessel is equipped with a Fire-lite MS-9050UD fire panel.
- Before work begins, the Contractor shall arrange for a visit from a Bureau Veritas classification society inspector.
- The Contractor shall retain the services of a licensed company to conduct the annual inspection and certification of the fire detection system.

#### **Location**

The fire detection system control panel is found on the port side of the wheelhouse.

#### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

### **8.10.2.4 – PROOF OF PERFORMANCE**

#### **Inspection**

- All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the PWGSC inspector.

#### **Certification**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all reports and certificates to the person responsible for the vessel's maintenance.

### **8.10.2.5 – DELIVERABLES**

#### **Drawings/reports**

- The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of all reports and certificates to the person responsible for the vessel's maintenance.

## **8.10.3 ANNUAL INSPECTION OF FIXED FIRE SUPPRESSION SYSTEM**

### **8.10.3.1 – SCOPE**

- The purpose of this specification is to perform maintenance on and certify the fixed fire suppression system on the CCGS GC-03.
- The Contractor shall communicate with the Chief Engineer before undertaking the work for this item. This work shall be performed in conjunction with the portable fire extinguisher maintenance without reducing the fire suppression capacity aboard the vessel.
- The fixed suppression system is a Kidde 2 x 75 lbs. system.

### **8.10.3.2 – REFERENCES**

#### **Reference drawings/data plate information**

Kidde system

#### **Standards**

- The Contractor must be licensed to recertify this system, which the Contractor shall do in accordance with the most recent marine safety regulations in force.
- The Contractor shall also comply with the International Safety Management Code standards for hot work, confined space entry, fall protection and lock-out procedures.

#### **Regulations**

- *Canada Shipping Act, 2001*

#### **Equipment provided by owner**

- Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

### **8.10.3.3 – TECHNICAL DESCRIPTION**

#### **General**

- The Contractor shall retain the services of an authorized representative who will test and inspect the vessel's Kidde system as part of the annual inspection and certification of this system. The Chief Engineer will be present at all tests.
- Aside from the following tests, the Contractor shall perform all tests required by the Bureau Veritas inspector on site. In the estimate, the Contractor shall provide the cost of testing the alarms (indicator lights and sirens) on all devices, testing the nitrogen-releasing cylinders, testing ventilation closure devices, and testing slack loops and cables.
- The Contractor shall use air pressure to clean the pipes and pneumatic actuators and ensure that they work properly. The pipes and nozzles must be free of obstruction.
- The Contractor shall ensure that the alarm displays and sirens work properly. The Contractor shall weigh each cylinder and record the results. At the end of the refit, the Contractor shall provide the Chief Engineer with copies of all certificates.
- When the tests and inspections are completed, the Contractor shall reassemble and reactivate the systems.

#### **Location**

- The Kidde fire extinguishers are found behind the wheelhouse.

#### **Obstructions**

- The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

### **8.10.3.4 – PROOF OF PERFORMANCE**

#### **Inspection**

- All work must be completed to the satisfaction of the Chief Engineer, the person responsible for the vessel's maintenance and the TC inspector.

#### **Tests**

- The Chief Engineer must be present for the system inspection and test.

#### **Certification**

- The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

#### **8.10.3.5 – DELIVERABLES**

##### **Drawings/reports**

- The Contractor shall provide the Chief Engineer with a paper copy of the typed report, detailing the inspections, modifications and repairs made, prior to acceptance of this item. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

### **8.11. HULL AND STRUCTURE**

#### **8.11.1 INSULATION PROTECTION**

Supply parts and labour to install an insulation protective fence for the two engines rooms inboard side. The approximate surface it's about 4 feet of height by 30 feet of length.

### **8.12. PROPULSION AND MANOEUVRING SYSTEMS**

#### **8.12.1 MAJOR OVERHAUL OF "WALTER V DRIVE" V-DRIVE(STARBOARD)**

- a. All work shall be performed according to the manufacturer's procedures and specifications. All parts deemed defective shall be replaced as per the manufacturer's recommendations.
- b. Provide the material, equipment and labour to perform a complete overhaul of one (1) V-drive on the CCGS Garde-Côte 03:

<b>"V" Drive:</b>	
Marque:	Walter V Drive
Modèle :	RV 61
No. Série :	49211
Ratio :	2.04 :1

- c. After the V-drive is fully dismantled, all parts shall be cleaned and inspected, and the necessary measurements and clearances taken to allow for inspection by the MSO/TC expert and the CCG representative. The V-drive shall then be reassembled according to the manufacturer's specifications. The Contractor will be responsible for disposing of the used oil in accordance with the regulations in force. The Contractor is

responsible for contacting the CCG and MSO/TC representatives within the required time.

- d. Supply and replace with new parts the following components:
- all bearings
  - all seals
  - all gaskets
  - all hoses
  - necessary fastenings
  - all filters
  - lube oil
- e. If other mechanical parts need to be replaced, the cost of parts shall be adjusted on form PWGSC 1379. All parts used shall be OEM.
- f. Work must be done by an manufacturer authorised technician

Parts supplier: The Walter Machine Company Inc.  
84-98 Cambridge Avenue  
Jersey City, NJ 07307 USA

#### **8.12.2 MAJOR OVERHAUL OF CAPITOL GEAR TRANSMISSION(STARBOARD)**

- All work shall be performed according to the manufacturer's procedures and specifications. All parts deemed defective shall be replaced as per the manufacturer's recommendations.
- Provide the material, equipment and labour to perform a complete overhaul of one (1) Transmission on the CCGS Garde-Côte 03:

<b>Transmission:</b>	
Marque:	Capitol Gear
Model :	HE 10200
Serial number :	14529-1087
Ratio :	2.11-1

- After the transmission is fully dismantled, all parts shall be cleaned and inspected, and the necessary measurements and clearances taken to allow for inspection by the MSO/TC expert and the CCG representative. The transmission shall then be reassembled according to the manufacturer's specifications. The Contractor will be responsible for disposing of the used oil in accordance with the regulations in force.
- The Contractor is responsible for contacting the CCG and MSO/TC representatives within the required time.
- Supply and replace with new parts the following components:

- all bearings
  - all seals
  - all gaskets
  - all hoses
  - necessary fastenings
  - all filters
  - lube oil
- 
- If other mechanical parts need to be replaced, the cost of parts shall be adjusted on form PWGSC 1379.
  - All parts used shall be OEM.
  - Work must be done by an manufacturer authorised technician

## **8.13. VESSEL'S GENERATION OF ELECTRICAL POWER**

### **8.13.1 PORT SIDE ALTERNATOR**

- Alternator brand: LEROY SOMER alternateurs
- Alternator model: LSA42.2L9JM/4 ser: 213094-2

8.13.1.1 Padlock the power breaker and starting valve of the starboard alternator engine.

8.13.1.2 Perform an insulation test (Megger test) on the alternator prior to cleaning. Disconnect the voltage regulator, taking care to mark the wires (the voltage regulator must not be connected to the exciter). Perform the insulation tests between the four windings and the frame.

8.13.1.3 Open the alternator access doors. Clean all alternator windings with compressed air. Do not use solvent to clean them.

8.13.1.4 Test all exciter diodes to ensure that they work properly.

8.13.1.5 After cleaning, close the alternator access doors and redo the insulation test on the alternator (Megger test). Ensure that the voltage regulator is fully disconnected. Perform the insulation tests between the four windings and the frame.

8.13.1.6 Once the insulation tests are complete, reconnect the voltage regulator. Close the alternator access doors. Remove the lock on the power breaker and starting valve of the alternator engine.

8.13.1.7 In the presence of the CCG representative, start the alternator engine following the steps in the relevant procedure. Test that the alternator works properly by charging it for one hour. Ensure that the charge on the alternator does not exceed its capacity.

8.13.1.8 Take the alternator temperature readings using an infrared thermometer and record them. Take a minimum of five readings, one at the front of the alternator, three in the centre, and one at the back.

8.13.1.9 The insulation tests and tests must be done in the presence and to the complete of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.

8.13.1.10 A report shall be produced containing the readings from the insulation tests before and after cleaning, the diode test, the temperature readings and any other relevant comments on the wear or general condition of the alternator.

8.13.1.11 Must be done by a certified electrician.

## **8.13.2 STARBOARD SIDE ALTERNATOR**

- Alternator brand: LEROY SOMER alternateurs
- Alternator model: LSA42.2L9JM/4 ser: 274616/1

8.13.2.1 Padlock the power breaker and starting valve of the starboard alternator engine.

8.13.2.2 Perform an insulation test (Megger test) on the alternator prior to cleaning. Disconnect the voltage regulator, taking care to mark the wires (the voltage regulator must not be connected to the exciter). Perform the insulation tests between the four windings and the frame.

8.13.2.3 Open the alternator access doors. Clean all alternator windings with compressed air. Do not use solvent to clean them.

8.13.2.4 Test all exciter diodes to ensure that they work properly.

8.13.2.5 After cleaning, close the alternator access doors and redo the insulation test on the alternator (Megger test). Ensure that the voltage regulator is fully disconnected. Perform the insulation tests between the four windings and the frame.

8.13.2.6 Once the insulation tests are complete, reconnect the voltage regulator. Close the alternator access doors. Remove the lock on the power breaker and starting valve of the alternator engine.

8.13.2.7 In the presence of the CCG representative, start the alternator engine following the steps in the relevant procedure. Test that the alternator works properly by charging it for one hour. Ensure that the charge on the alternator does not exceed its capacity.

8.13.2.8 Take the alternator temperature readings using an infrared thermometer and record them. Take a minimum of five readings, one at the front of the alternator, three in the centre, and one at the back.

8.13.2.9 The insulation tests and tests must be done in the presence and to the complete of the Transport Canada inspector. The Contractor is responsible for contacting Transport Canada about the inspections.

8.13.2.10 A report shall be produced containing the readings from the insulation tests before and after cleaning, the diode test, the temperature readings and any other relevant comments on the wear or general condition of the alternator.

8.13.2.11 Must be done by a certified electrician.

## **8.14. POWER DISTRIBUTION**

### **8.14.1 INSTALLATION OF ELECTRICAL RECEPTACLES**

Install four (4) permanent 120 volt/1 phase/duplex receptacles in the engine rooms. In each engine room, install one receptacle near the entrance and one to the rear of the

interior side (inboard). The electrical installation must comply with the electrical regulations and standards in force. The supply will come from the distribution panel in the wheelhouse. Two junction boxes must be install for the winches at the bow of the ship.

Must be done by a certified electrician.

#### **8.14.2 LIGHTING REPLACEMENT**

In the starboard engine room, replace the two (2) aft lights with incandescent bulbs with four-foot "explosion-proof" neons.

Must be done by a certified electrician.

#### **8.14.3 OBSOLETE ELECTRICAL WIRES**

Schedule 40 man/hours for the electrician to remove obsolete electrical wires. Using a voltmeter, the electrician shall work with the mechanic to remove the obsolete electrical wires at the junction box and shall seal the bulkhead connectors if necessary.

Must be done by a certified electrician.

#### **8.14.4 CONSOLE CHECK**

Must repair 2 light bulbs into the operator console for the neutral switch. Must install and connect from the engines room equipment to the operator console the following gages: port starboard main engines lub oil temperature and pressure, port starboard V drive and transmission lub oil temperature and pressure, port starboard generator lub oil temperature and pressure.

### **8.15. AUXILIARY SYSTEMS**

(N/A)

### **8.16. DOMESTIC SYSTEMS**

N/A

### **8.17. DECK EQUIPMENT/VESSEL SUPPORT SYSTEMS**

N/A

### **8.18. COMMUNICATION AND NAVIGATION SYSTEMS**

N/A

### **8.19. INTEGRATED CONTROL SYSTEMS**

N/A

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## 9. CCGS F.C.G. SMITH (F 005)

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Date of work: from March 2 to March 20 2015

### 9.10 – SAFETY AND SECURITY EQUIPMENT

#### 9.10.1 INSPECTION OF PORTABLE AND GALLEY FIRE EXTINGUISHERS

##### 9.10.1.1 – SCOPE

The Contractor shall remove the fire extinguishers from the vessel and transport them to an authorized service centre, where maintenance and testing will be performed. They shall then be brought back to the vessel and reinstalled.

##### 9.10.1.2 – REFERENCES

###### **Reference drawings/data plate information**

See list of vessel fire extinguishers:

**List of types of vessel fire extinguishers to be inspected:**

**Hydrostatic test and/or maintenance required for 2014**

#	Location	Model	Date of manuf	Serial no.	Last H/T	Next H/T	Last 6-year maintenance	Min. weight
<b>NAVIGATION BRIDGE</b>								
1	Wheelhouse	5 CO2	1985	A878605C	2011	2016	2011	12 lbs = 5.5 kg
2	Sounding room	5 CO2	2012	A265656	2012	2017	2012	12 lbs = 5.5 kg
<b>MAIN DECK</b>								
3	Forward cross-alleyway	5 ABC	2010	BR-380579	2010	2022	2010	
4	Dining room	5 CO2	2009	AB-286124	2009	2014	2009	13 lbs = 5.9 kg
5	Dining room	5 ABC	1985	888221C	2009	2021	2009	
6	Central alleyway	5 ABC	2010	K-42200	2010	2022	2010	
<b>ENGINE ROOM</b>								
7	Starboard engine room (top)	5 ABC	1985	G 888220 C	2009	2021	2009	
8	Starboard engine room	5 ABC	1985	H87823C	2009	2021	2009	
9	Starboard engine room	20 ABC	1985	H 166798C	2009	2021	2009	
10	Port side engine room	5 ABC	1987	P197854C	2011	2023	2011	
11	Port side engine room (top)	5 ABC	1985	H 87822C	2009	2021	2009	
12	Port side engine room	20 ABC	1985	H166805 C	2009	2021	2009	
<b>MAIN DECK</b>								

13	Control room	5 CO2	2012	AC-265653	2012	2017	2012	12.5 lbs = 5.7 kg
16	Fan room	10 ABC	2010	942003	2010	2022	2010	
23	533 Craft	5 ABC	2010	K-442218	2010	2022	2010	
34	Deck workshop	20 ABC	1990	surplus	2002	2014	2009	
26	Galley	6 litres K	2010	57063	2010	2015	2010	
<b>LOWER DECK</b>								
14	Forward starboard hold	5 ABC		M 910476 C	2005	2017	2011	
15	Forward port side hold	5 ABC	2010	514201	2010	2022	2010	
17	Aft starboard hold	5 ABC	1990	M 581106C	2002	2014	2008	
18	Aft starboard hold	5 CO2	2012	AC-265666	2012	2017	2012	13 lbs = 5.9 kg
19	Aft port side hold	5 ABC	2010	BR-380591	2010	2012	2010	
20	Aft port side hold	5 CO2	2012	AC-265649	2012	2017	2012	13 lbs = 5.9 kg
21	Port side steering gear	5 CO2	1985	A878585C	2008	2014	2008	12.5 lbs = 5.7 kg
22	Starboard steering gear	5 CO2	2012	AC-265647	2012	2017	2012	12 lbs = 5.5 kg
<b>DECK OVER THE WHEELHOUSE</b>								
25	Lifeboat	2.5 ABC	2004	32478	2012	2024	2012	Hydro + recharge
<b>ADDITIONAL EXTINGUISHERS</b>								

**Equipment provided by owner**

Unless otherwise indicated, the Contractor shall provide all the material, equipment and parts necessary for performing the work in the specifications.

**9.10.1.3 – TECHNICAL DESCRIPTION**

**General**

- An annual inspection of the portable and fixed fire extinguishers in the galley shall be carried out. Fire extinguisher inspection and maintenance shall be entrusted to a qualified representative.
- The Contractor shall remove the fire extinguishers in a sequence such that the number of fire extinguishers off the vessel is never more than a third of those that are on board. The Chief Engineer will determine the order in which the fire extinguishers shall leave the vessel.
- The Contractor shall include the price of preventive maintenance and maintenance, hydrostatic testing, refilling, and annual inspection according to the information found in the table.

### **Obstructions**

The Contractor is responsible for identifying items causing an obstruction, temporarily removing and storing them, and then reinstalling them on the vessel.

Once the maintenance has been completed, the Contractor shall return all the fire extinguishers to the vessel and put them back in place according to the Chief Engineer's instructions.

### **Annual inspection**

The fire extinguishers must undergo a visual inspection at least once a year. This inspection involves turning the fire extinguishers upside down and shaking them, top down, in order to loosen the powder that they contain.

### **Preventive maintenance/Maintenance**

Dry chemical extinguisher: Every 6 years  
Work completed: We replaced the dry chemical and made sure that the device was functioning properly. A verification collar and a WHMIS label indicating the maintenance date must be attached, in compliance with standard NFPA10 or a more recent standard.

Water extinguisher, Type K, Co2: Every 5 years

### **Hydrostatic test**

This test involves confirming that the container is in good condition by subjecting it to a pressure determined by the manufacturer.

Dry chemical extinguisher: Every 12 years

Water extinguisher, Type K, Co2: Every 5 years

### **Refill**

When a fire extinguisher has been used, even partially, it must be refilled immediately. Note that a refill is not considered to be preventive maintenance.

#### **9.10.1.4 – PROOF OF PERFORMANCE**

##### **Inspection**

All work must be completed to the satisfaction of the Commanding Officer, the Chief Engineer or the person responsible for the vessel's maintenance.

##### **Tests**

Fire extinguisher testing shall be done in compliance with Transport Canada regulations.

##### **Certification**

The Contractor shall provide the Chief Engineer with two (2) paper copies of maintenance certificates along with the original. The Contractor shall also send an electronic copy of all the reports and certificates to the person responsible for the vessel's maintenance.

#### **9.10.1.5 – DELIVERABLES**

##### **Drawings/reports**

The Contractor shall provide the Chief Engineer with two (2) paper copies of reports and checklists that explain in detail the work and necessary modifications. The Contractor shall also send an electronic copy of all reports to the person responsible for the vessel's maintenance.

**9.11. HULL AND STRUCTURE**

N/A

**9.12. PROPULSION AND MANOEUVRING SYSTEMS**

N/A

**9.13. VESSEL'S GENERATION OF ELECTRICAL POWER**

N/A

**9.14. POWER DISTRIBUTION**

N/A

**9.15. AUXILIARY SYSTEMS**

N/A

**9.16. DOMESTIC SYSTEMS**

N/A

**9.17. DECK EQUIPMENT/VESSEL SUPPORT SYSTEMS**

N/A

**9.18. COMMUNICATION AND NAVIGATION SYSTEMS**

N/A

**9.19. INTEGRATED CONTROL SYSTEMS**

N/A

**CERTIFICATES AND REPORTS: CCGS F.C.G. SMITH**

Deliverable tracking table

Reference	Description	Deliverable document	Date received
9.10.1	Annual inspection of fixed fire suppression system	Fire system certificate	