

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving - PWGSC / Réception des soumissions
- TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage , Phase III
Core 0B2 / Noyau 0B2
Gatineau
Québec
K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Ship Construction, Refit and Related
Services/Construction navale, Radoubs et services
connexes
11 Laurier St. / 11, rue Laurier
6C2, Place du Portage
Gatineau
Québec
K1A 0S5

Title - Sujet SAR Lifeboat Project	
Solicitation No. - N° de l'invitation F7047-141000/C	Amendment No. - N° modif. 024
Client Reference No. - N° de référence du client F7047-141000	Date 2015-02-12
GETS Reference No. - N° de référence de SEAG PW-\$\$MC-017-24806	
File No. - N° de dossier 017mc.F7047-141000	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-03-12	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Lamothe, Brenda	Buyer Id - Id de l'acheteur 017mc
Telephone No. - N° de téléphone (819) 956-6297 ()	FAX No. - N° de FAX (819) 956-7725
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

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

Amendment #24 is raised to post Questions and Answers, Bidders Conference Questions and Answers and to post the Painting Standards which are separate electronic attachments.

1. Bidders Questions and Canada's Answers

Annex G

Q.1 The RFP indicates that a bidders' meeting could take place. When would this decision be made and when would the meeting be announced?

2.7 BIDDERS' CONFERENCE

A bidders' conference could be organized, in which case clause SACCA9083T (2014-06-26) Bidders' Conference would apply.

A.1 If by Friday December 5th, sufficient bidders have demonstrated their interest to the CA by email, a bidder's conference will take place on December 16th in Ottawa.

Q.2. The English RFP document is larger (818 pages) than the French (737 pages); is the French version complete?

A.2 Yes. Both the English and French documents are complete. The formatting in the French Construction Specification is different from the English hence the total number of pages.

Q.3. We just went through the RFP document and noted that Lloyds Register (LR) classification notation with no equivalencies stated in the documents. Furthermore the design documents, plans and drawing have all been approved by LR, (refer page 76 annex A section 1.4 and page 239 and 240).

We are somewhat puzzled that other companies did not receive notification for approval through Marine Safety Supply Arrangement Agreement; being one of the approved Recognized Organization (RO) members. The entire documents have references to LR rules ref. page 141, 162 & 163 etc. This is not a level playing field for other ROs to participant in shipyards bids for SAR lifeboats. We are quite disappointed to observe that CCG always make references to LR rules and no other classification societies which puts us at disadvantage. Your comments or views are greatly appreciated.

A.3. In accordance with the RFP the SAR Lifeboats shall be built under the Delegated Statutory Inspection Program (DSIP) and in accordance with the rules of a Classification Society designated by Transport Canada as a Recognized Organization (RO). Bidders are free to use any RO that they would like as long

as fulfilling the above requirement. The design of the SAR Lifeboat was conducted utilizing Lloyd's Register Rules as the baseline rule set for the initial design work and LR was the RO selected to review and appraise the design IAW these rules. However, IAW the Construction Specification (CS), bidders are free to use any RO rules set for the final design of the SAR as long as the selected RO meets the DSIP requirements in the RFP. This is indicated in the CS in 1.70.2.0-8 The Vessel must meet all applicable Lloyds Register Classification Society Rules or equivalent rules of IACS members recognized by Transport Canada.

- Q.4. As a qualified Canadian sub-contractor in this domain it seems very strange that we can neither get the program specification drawings nor the contact info of the potential primes to then get it from them. There are potentially 10 shipyards in Canada who will now be inundated with potential subcontractors trying to get the information that should be available under NDA. If there was at least an industry day scheduled that would help us identify the primes.
- A.4. With reference to the memory / USB sticks they are to be distributed to the Prime bidders / Shipyards who will be building these SAR Lifeboats due to the Intellectual Property rights and to limit the number of these memory / USB sticks. Canada does promote that your company contacts any of the Canadian shipyards.
Please see question and answer #1 about the Industry Day / Bidders Conference.
With regards to your question on the identification of the potential shipyards, our new Buy and Sell website does not allow this due to Privacy Policies but does allow for open data on the Buy and Sell Website.
- Q.5. Due in part to the holiday season approaching, and most notably, the complexity of this solicitation and requested deliverables, may we also request an extension to the bid closing date until end of February?
- A.5. Your question is noted and at this time the bid closing date remains unchanged. The bid closing date is January 27th, 2015.
- Q.6. Last March responses were made to the Letter of Interest for these vessels with a number of suggestions. Suggestions were not addressed or adopted in the RFP so we will now pose the major ones as questions to this solicitation.

Time of order:

When does Canada expect an order to be placed for these vessels?

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- A.6. All contract awards are subject to Canada's internal approval process which includes a requirement to approve funding in the amount of any proposed contract and is subject to Canada securing appropriate licensing terms for the design. Subject to the above, the commencement of work for this requirement will be determined once the winning bidder has been selected and awarded the contract.
- Q.7. Response to RFP:
Last March we suggested a minimum 3 months for a response to this RFP. Request an extension be granted to at least the end of March 2015 in consideration of the complexity and magnitude of the project and the loss of the month of December because of year end business requirements and the Christmas season.
- A.7. Your question is noted and an extension to the bid closing is under consideration.
- Q.8. Design Responsibility:
Canada is providing a detailed design for the vessels. We do not understand why the builder is being asked to provide a performance guarantee ref 6.2 (a).
- A.8. As this is not a proven design and Canada has yet to build these SAR Lifeboats, the winning contractor must perform the Design Check in accordance with the Contract.
- Q.9. Design Check:
If the builder is required to provide a performance guarantee, then the Design Check must be very detailed and thorough. Request that a minimum 90 days be allotted for this.
- A.9. Your question is noted and at this time, the 45 days allotted to complete the Design Check remains unchanged.
- Q.10. Vessel deliveries:
The required delivery schedule posted in the solicitation is unrealistic, especially considering that 'time is of the essence'. Suggest that Canada require bidders to submit their best proposed delivery schedule.
- A.10. Your question is noted, however the delivery schedule remains unchanged.
- Q.11. Cost escalations and exchange rates:
Please advise how bidders are to handle cost escalations and currency exchanges over the life of the project.

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- A.11. These factors should be taken into account by the bidder when preparing their submission.
- Q.12. Request that Canada advise who the project Technical Authority will be.
- A.12. The Technical Authority is not divulged until Contract Award. All questions are to be addressed to the Contracting Authority on the file.
- Q.13. It would be very helpful and reassuring to bidders to be provided a unequivocal list of mandatory's that must be complied with rather than the RFP making the statement that all mandatory's are defined by the terms "shall, will, must, etc. It has been very typical in the past that bidders have been considered "non-responsive" if they miss even a single mandatory item defined this way and needless to say bidding this type of project is extremely expensive to the industry.
May we please request such a definitive list?
- A.13. As per the RFP, Part 3 in order for a bid to be declared responsive, a bid must:
a) comply with all the requirements of the bid solicitation; b) meet all the Mandatory Criteria (MC) and the Mandatory Technical Criteria (MTC); c) obtain the required minimum of 40 percent for each individual Rated Technical Criterion (RTC); and d) obtain the required minimum pass of 80 out of 200 points overall for the Rated Technical Criteria (RTC).
- Q.14. RFP section 5.3, 5.4 and 5.5. Can you please re-confirm that these specific documents can be provided after contract award, and NOT at bid submission time?
- A.14. Part 5 sections 5.3, 5.4 and 5.5 are certifications that should be submitted with the bid, however they are not mandatory requirements at bid submission. They are mandatory precedent to Contract Award.
- Q.15. Milestone schedule – "B" ; a) May bidders provide an alternative schedule as the schedule "B" in this RFP is NOT conducive to our production methods and cash flow requirements. Eg: Milestone 11 representing a 15% payment "after vessel delivery (including spares and training) and Canada's acceptance". This is considered totally unreasonable.
b) May bidders provide a "2% Warranty Bond" in lieu of the 2% cash warranty holdback for 12 months ?
- A.15. a) Canada has reviewed Schedule "B" Milestone Payment Schedule and has determined that it remains unchanged.

b) At Milestone 13 the deliverable is a Completion of 12 month warranty period and it remains at 2% payment of the unit price.

Q.16. Further to a review of the bid documents, I would like to know whether it would be possible to extend the bid submission deadline to the end of February?

A.16. Please see Question and Answer #7, your question is noted and an extension to the bid closing is under consideration.

Q.17. Paragraph 24.0 (TRADE QUALIFICATIONS AND WELDING) of the solicitation document reads as follows: *"The Contractor shall use qualified, certificated and competent trades people and supervision to ensure a uniform high level of workmanship. The Inspection Authority may request to review and record details of the certification and/or qualifications held by the Contractor's tradespeople."*

Quebec shipyards do not employ "trades people" at their sites, but rather workers, supervisors and inspectors who have training in welding and fitting and who hold a Canadian Welding Bureau (CWB) welding competency card, which is regularly renewed, as specified in paragraph 38.0 of the Invitation to Tender document.

I would appreciate it if you could confirm the validity of paragraph 24.0.

A.17. The RFP document at Part 7 Section 24 has been amended to read:
The Contractor must use qualified, certified (where 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.

Q.18. RFP section 13 , ANNEX "A" , Spec 2.6.2.6 & 2.6.2.6.7. and ANNEX "A" - APPENDIX A-2 ; regarding French documents , manuals , labels etc . May we request the Crown consider that bidders provide French translated documents and manuals "where available" , and include an allowance "established by the Crown" for all other translation work, documents , labels etc . The rationale is that it is impossible for bidders to know what this costing will involve and vendors will not commit either . This has been a recurring problem on every RFP for all of the 38 years I've been involved in Government bidding .

- A.18. All deliverables are required in both official languages where indicated. Concerning Technical Manuals, Canada draws attention to the following statement in Annex A, Appendix A-2, DID I-001 (Technical Manuals):

“Technical manuals are required both in English and French. Where required copies of English or French are not readily available commercially, unilingual versions in either of Canada’s official languages will then be accepted provided that the Contractor provides written evidence from the supplier that the prescribed manuals are not commercially available in the other official language.”

- Q.19. There’s a paragraph that states: “Object Number: 2.2.33.1.0-3 - The diesel engines must be compliant with IMO exhaust emission levels required at the time of keel laying. To be discussed with Canada.” Can you ask the Crown to clarify specifically what they are requiring? If all of the keels are laid prior to Jan 1 2016, IMO II would still be in effect, which is a simpler and less expensive option to supply and integrate. Also, what is meant by: “To be discussed with Canada”?

- A.19. Object Number 2.2.33.1.0-3 of Annex A- Search and Rescue Lifeboat: Appendix A-3 Construction Specification is modified to read as follows:

“Each diesel engine must meet or exceed the Tier II requirements for exhaust emission limits required by MARPOL, Annex VI, Regulations for the Prevention of Air Pollution from Ships.”

The sentence “To be discussed with Canada” has therefore been removed.

- Q.20. We wish to raise this additional concern regarding section 4.4.1 of Annex “A”. In the past Federal solicitations have stated that the builder must maintain a quality system that “models” the ISO 9001 system, which we have accommodated. This section of Annex ‘A’ states that our QA system must now be “CERTIFIED” to the current version of the ISO 9001:2000. This “certification” now adds another layer of overhead cost to the bidders without adding any value or assurance to the build quality, and could take a considerable length of time to obtain. The Governments own inspection process ensures that the successful proponents system is maintained through routine auditing of its functionality during the contract period. May we request that the requirement for “Certification” be deleted?

- A.20. Section 4.1 of Annex A- Search and Rescue Lifeboat: Shipbuilding Statement of Work is amended to read as follows:

The Contractor must implement and maintain a Quality Management System (QMS), consistent with the current version of the ISO 9001:2000 standard. The Contractor need not be certified to the applicable standard; however, the Contractor's quality management system must address each requirement contained in the standard. The Contractor must use reasonable commercial efforts to ensure that all other Subcontractors and Suppliers comply with appropriate quality management requirements.

- Q.21. We would like to have more detail about the IMO Tier certification. Knowing that the construction of the lifeboat will most likely start in 2016 or later, the IMO Tier3 should be the certification but there is no detail or evidence that IMO Tier3 engines are required in the RFP. We also have to consider that some emergency vessels can be excluded from the IMO certification.

What is the requirement concerning the certification level for the SAR lifeboat diesel engines? IMO Tier2 or Tier3?

- A.21. Please see Question and Answer #19.

- Q.22. May I please request reconsideration and response to question and answer # 15 of amendment 004 , schedule "B" milestone payment schedule.?

With all due respect, we find the response answer to this question very unreasonable and inflexible, to the extent that we are considering dropping out of the competition on the basis of this alone . As the milestone schedule stands it is flawed and posses unnecessary hardship on a shipyard. In addition , it drives up cost to the Crown due to financing requirements .

Additional rationale is as follows:

a) We provided an alternative milestone schedule which deleted two milestones (4 and 9) as they overlap the requirements of milestone block 1(a to d). This however meant moving funds up into block 1 where they should be, and as needed. There is a lot more upfront costs in this project, than funds have been allotted for in block 1.

b) In addition to the aforementioned hardship of payment # 11 at 15% the Crown maintains it wishes to hold back an additional 2% for the one year warranty period. Then there is 3% for as-fitted drawings which also can't be completed and provided until after delivery. Therefore at delivery on the first vessel (and possibly subsequent vessel's), the Crown will be holding back 20% of each vessel's value with the added impact that the shipyard will not receive payment for an additional 30 days minimum post approved invoicing. This will be an exponential problem when vessels are being delivered every 4 months (7 to 10 vessels in a 4.5 year program).

In summary, the shipyard will be struggling in a cash negative position.

As a last comment, it was our understanding that this build program was to be slotted for smaller shipyard businesses outside of the NSPS, however we're finding many of the requirements of this solicitation scaled for "Big Business".

A.22. Please see attached the amended Schedule B "Milestone Payment Schedule". At Milestone #4 it is requested by Canada for "All Contract Design Drawings and Purchases orders submitted to Canada" as this must be verified by Canada and is a deliverable under the Contract.

At Milestone #9 "Test and Trials procedures and agenda submitted to Canada" is also verified by Canada and is a deliverable under the Contract.

At Milestone 13 "Completion of 12 month warranty period" is a required deliverable under the Contract and remains unchanged.

Q.23. Question 23 is raised to correct the French translation answer at Q. and A. #17.

A.23. Answer 23 remains unchanged for the English Q. and A.#17 and is only raised to correct the French translation Q. and A. #17.

Q.24. Could the main hull drawings be provided in AutoCAD?

A.24. Yes, the following drawings can be provided in AutoCAD format :

SAR10010R3 Lines Plan
 SAR21000R4 Midship Section
 SAR21010R4 Structural Arrangement
 SAR21030R2 Shell Expansion
 SAR21050R4 Structural Sections
 SAR22010R5 Deckhouse Structure
 SAR30000R4 General Arrangement
 SAR30002R2 Inboard Profile
 SAR50000R3 Machinery Arrangement

Q.25. Could the table of offsets be provided for the hull or the hull plate flat layouts be provided?

A.25. The table of offsets will not be provided. As detailed on drawing SAR10010R3 Lines Plan: "3D GEOMETRY FILE IS AVAILABLE IN LIEU OF A TABLE OF OFFSETS. This model is not required for the purposes of bid preparation and will be provided to the successful bidder at time of contract award.

Q.26. We continue to find the answers to questions 15 and 22 very unsatisfactory. May we please request once again if the Crown will accept bids with an

alternate milestone payment schedule and that the crown base their
evaluation point system on the proposed alternate schedule from a bidder?

A.26. Schedule B - Milestone Payment Schedule has been amended and was attached to solicitation amendment #7. Bidders must bid to the same criteria set out in the evaluation for this solicitation.

Q.27. With regard to question # 11, previous RFP solicitations by the Crown had provisions for rate of exchange fluctuation. At present our dollar is roughly 85 cents to the US dollar primarily due to the reduction in the price of oil . As the Crown can appreciate, oil is a very volatile commodity and in all likelihood it will rebound. Once this happens US materials quoted at the conversation rate today could become unwieldy more expensive if and when this rebound takes place. Would it not be reasonable for the Crown to re-instate a provision for rate of exchange fluctuation to help small yards defray this risk?

A.27. This item is currently under review.

Q.28. Part 7 section 11 states that the production schedule shall be provided within 15 days of contract award and yet MTC1.2 states this schedule (which I understand to be the same one) is to be provided with the bid submission. Can this requirement please be clarified?

A.28. In accordance with MTC1.2 Project Schedule and Delivery Dates - Preliminary Project Schedule - The Bidder must provide a preliminary project schedule for the subject RFP, indicating the sequence and the completion dates of project milestones, deliverables, and project tasks based on a Contract Award as "day 0." The project schedule must indicate dates for the main events, including all milestones listed in the milestone schedule, attached as Schedule B.

Bidders must submit the required mandatory information in this solicitation with their proposal to be compliant.

At Part 7 section 11 PRODUCTION SCHEDULE , 11.1 Within fifteen (15) working days of Contract Award, the Contractor shall submit to Canada a preliminary Production Schedule including critical path items.

a 11.2 The Contractor is responsible for planning and scheduling the Work required herein. The Production Schedule shall be maintained and updated on continuing basis and shall be presented to the Contracting Authority, seven (7) calendar days prior to each Progress Review Meeting.

This Production Schedule is required fifteen (15) working days from Contract Award date. This Production Schedule will have concrete dates set out and aligning with the Contract Award date.

- Q.29. DADM-008 requires that the contractor to document the minutes of the meetings yet PWGSC always performed this task in the past as it was in their best interest. Can you please clarify if this to remain, that the contractor now performs this duty, or not?
- A.29. Yes, the contractor shall record the minutes of all meetings. Please see Part 7 Section 30.0 Progress Review and Technical Meetings.
- Q.30. Also can the designers please advise if there is any compound curvature in the hull plating and if so where it is?
- A.30. It is the bidder's responsibility to assess the technical package and to identify areas of compound curvature. There is sufficient information within the technical package to do so. However, it can be confirmed that areas of compound curvature include, but are not necessarily limited to, hull plating in the following locations: along the hull below the main spray rail, in particular in the forefoot, and in the propeller 'tunnel'. In addition, there is compound curvature in the main deck due to camber and sheer.
- Q.31. Reference Annex "A" section 4.7.1 . Can you please advise if the Coast Guard would be receptive to other integrated systems (other than those listed) offered as "optional"?
- A.31. In addition to the propulsion system, only the systems/suites listed at section 4.7.1 are required to have single integrators. There is no provision or requirement for "optional" systems/suites per se in the specifications. If, in the bidder's question, the terms "optional" and "other" are meant to mean "additional" systems/suites, CCG would be receptive, although the choice to offer such additional systems/suites is at the shipyard's discretion. The associated equipment selection must be compatible with all requirements and specifications.
- Q.32. RFP Part 7 – 4(4.1) . Can you please clarify/confirm the delivery for all vessels is in fact the CCG base in Dartmouth N.S.?
- A.32. The delivery point for all vessels is CCG Base Dartmouth (Bedford Institute of Oceanography), N.S.
- Q.33. RFP section 17.4 (C) and (D). Can you please advise how a dispute regarding NCR's raised by IA is dealt with?
- A.33. In accordance with Part 7 section 17.4 (c) and (d) when a non-conformance report is issued by the Inspection Authority it is because the Contractor is not in accordance with the Work in the Contract. The contractor must implement a resolution and it must be approved by Inspection Authority prior to

commencement of the resolution and must be copied to the Contracting Authority. All work must be completed in accordance with the Contract, please also see the General Terms and Conditions 2030 12 (2014-09-25) Inspection and Acceptance of the Work.

Q.34. Annex "D" consists of 11 lines. Can you please advise (specify) to what extent and limit bidders are required to provide information?

A.34. At Annex "D" Equipment, Material and Services Source List & Subcontractor's List, if the bidder needs more lines added, please do so.

Q.35. Schedule "A" The first 7 vessels has a line item cost for contract financial security however the optional (3) vessels does not. Is contract financial security therefore not required on these last (3) vessels?

A.35. Yes, the Cost of Contract Financial Security is based on the seven (7) vessels in accordance with Schedule "A".

Q.36. Schedule "A" "ADDITIONAL WORK" The request for additional work requests a cost for all labour, engineering and supervision however engineering costs are significantly different to labour and supervision . May we suggest it be prudent for a separate line item for engineering alone?

A.36. At Schedule "A" and Part 7 section 25.0 Payment, this rate shall be a blended rate for all classes of labour, engineering and foreperson and shall include all overheads, supervision and profit.

Q.37. Annex "A" 2.9 requires the work to be carried out using the metric system however structural aluminum plate and sections are still only available in imperial dimension. Can you please confirm that the nearest imperial equivalents to metric sizing would be acceptable?

A.37. As the structural design drawing indicate imperial plate and sections, it is acceptable to use imperial dimensions for these items.

Q.38. Annex "A" 2.11.2.1 requests from the contractor, a performance guarantee upon completion of the design check that the vessel's when built will perform fully in accordance with the contract including the specification . Can you please advise and confirm if successful tank testing has been carried out on this new vessel design, and if the results are available ?

If this has not been performed we contend that it would be unreasonable to expect a builder to guarantee performance on a unique and unproven hullform as this, and in that case we would suggest this guarantee requirement be waived. Please advise?

A.38. There was no tank testing programme conducted for the design however the designer [Robert Allan Limited] conducted an extensive CFD assessment during the design phase. The results of these simulations are contained in document 212-045, *CFD Analysis of SAR Lifeboat R1*. As detailed in this document this CFD assessment was validated "*by CFD simulations for the Severn (RNLI) hull and comparison of the results to the extensive set of model tests data available, both in the bare and appended configurations*".

For the Design Check, the successful bidder is being asked to review and accept the engineering developed by Robert Allan Ltd and provide a guarantee that the equipment the bidder has proposed for integration in the design and the construction engineering for the production of the vessel will enable the vessel to meet the estimated performance criteria.

Q.39. Marine Liability Insurance – G5003C 2014 -06-26

1. – This section refers to a limit of liability continued in the Marine Liability Act 2001. I have reviewed that document and cannot find a reference to any limit of insurance. Can you please ask what limit they would like you to carry>
 - In addition to this they are asking for an Excess Collision liability policy. Can you please ask why they are asking for this to be a limit in excess of the P&I limit.

A.39. Based on the Market Standard and with the terms negotiated with the Industry there is no set limit.

Q. 40. Errors and Omissions Liability Insurance G2002C 200-05-12

Please ensure that the owner will accept a certificate of insurance from your Naval Architect adding Hike and the owner as additional insured's.

A.40. Please follow the instructions in accordance with Annex F Errors and Omissions Liability Insurance G2002C

Q.41. 36.0 Limitation of Contractors Liability for Damages to Canada

This section refers to your limit of liability being \$10,000,000 per occurrence and \$20,000,000 in the aggregate. Please clarify if they are also requiring your limits of insurance to be \$10.0M / \$20.0M.

A.41. Part 7 section 36.0 Limitation of Contractors Liability for Damages to Canada is for Liability not for Insurance, please follow the section in accordance with the Solicitation.

Q.42. Annex A,

Electrical 2.4.24.2; 'The electronic and Acoustic Navigation Systems must follow the Construction Specification Design Drawing 90000 Integrated Communications and Navigation System Schematic.'

In the Confidentiality Agreement it specifically permits access to subcontractors but does not refer to suppliers. Can bidders sign sub NDI agreements with suppliers to acquire needed information on system specific segments of the RFP Specification?

There are many sections in the Specification where the Specification detail is not adequate for suppliers to provide complete information.

A.42. The Confidentiality Agreement provides that the Bidder must not, without first obtaining the written permission of the Contracting Authority, disclose to anyone, other than an employee or a proposed subcontractor with a need to know, the Confidential Information. In accordance with Canada's SACC Manual 2030 General Conditions - Higher Complexity – Goods (2014-09-25) section 06 Subcontracts, Canada considers that a subcontract includes the purchase of "off-the-shelf" items and any standard articles and materials that are ordinarily produced by manufacturers in the normal course of business. Disclosure of any Confidential Information to any proposed subcontractor must be in accordance with the Confidentiality Agreement.

Q.43. Amendment 009, Schedule B, Milestones; We agree with comments raised in Q15 and Q 22 regarding a warranty holdback of 2% for 12 months as excessive. This type holdback is not used by other G-7 countries including the US. This type of holdback penalizes the CAD Marine industry by preventing small businesses from re-investment to improve efficiencies in our businesses. This is counter-productive to CAD industrial efficiency. There have been many articles of late noting that US industrial efficiencies are much higher than Canadian industry. This does not help. We agree that service is a very important part of any contract.

The Performance Bond fully covers Canada during the full warranty period and a claims period for a year after that. Performance bonds cover the entire length of the Contract including warranty and provide a full year after that for the customer to file any claims from within the warranty period.

Will Canada consider reviewing the Bidder's submitted good service record with verification provided by its customers and recognize the Performance bond ensures no risk to Canada during the full warranty period?

We ask Canada to return the 2% holdback back to the rightful owner of this money, the Contractor who has earned and worked hard for it. This a fair and reasonable request.

A.43. Canada has reviewed and noted your request. Please be advised that Milestone 13 "Completion of 12 month warranty period" remains unchanged.

Q.44. Appendix A-4; Will Canada provide cut files for the successful bidder?

A.44. It is uncertain the specific files that are being referred to in the question. However, If the question is referring to the nesting files for cutting plates and shapes (NC cutting files), these will not be provided as it is the shipyard's responsibility to produce final lofting and production drawings.

Q.45. What we are looking for to quote the windows for this project is the polycarbonate stacking for each window. (**Thickness**)As from the spec there are some heated and some not.

If there is a window schedule available that would be helpful as well as that would allow me to call out each window for accurate location and costing.

A.45. A window schedule has not been created. Windows are to be designed and procured as part of the contract but can be estimated as per the Construction Specification and as in 22010R5 Deckhouse Structure. A window list has been provided in Construction Specification 2.6.25.1, and for weight estimating purposes window thicknesses have been estimates as 5/8" for front windows and 1/2" for side windows.

Q.46. Annex "A" 4.7 Integrators other than the propulsion Integrator;

The specifications and drawing already stipulate the components which make up these systems and the effectiveness of these will be established during the design check. Ultimately the shipyard is being made responsible for the entire vessel and its systems both at the build stage, and under the warranty period. We are having difficulty finding single source "Integrators" for some of these systems.

May we request these systems integration requirements be waived as we have never had to perform this on any other build program, it is a burdensome request due to the fact that these systems are made up of various OEM and shipyard components , and we see no added value in requesting it?

A.46. The requirement in the SOW will not be waived; however the SSI does not have to be an organization external to the shipyard. The shipyard is free to be the integrator for any or all of the systems and be responsible for the overall engineering design, integration, and testing of the system(s).

Q.47. We're finding the document package associated with this tender very convoluted and rather frustrating. The specification itself is in many cases not specific with regard to equipment outfit. Can you advise where perhaps these can be found

for other than those on the main equipment list and drawings as we feel there should be more consolidated definition?

A.47. All the information can be found in the technical package provided. The technical design package documents does not specify the exact makes and models but does define the necessary characteristics of the equipment. Often during the design work RAL used indicative equipment as the basis for the design RAL and this is indicated in the technical package. It is the responsibility of the successful bidder to select equipment compatible with the requirements and the specifications.

Q.48. May we also request what is meant by "Object Number" in the specification and what do these numbers associate with?

To give one example; spec section 2.5.12.1.2 10 states 1) heat recovery heat exchanger "DomesticMarine or equal per engine for transferring heat from each main engine jacket water circuit and transferring it to the tempered water circuit as per Construction Specification Design Drawings. Object Number 2.5.12.1.2.0-1.0-2...?

A.48. CCG uses software called DOORS

(<http://www-03.ibm.com/software/products/en/ratidoor>) for its requirements tracking. The software identifies each requirement by giving it a unique Object Number. The specification presented is the default format DOORS exports to Word. The Object Number appears first and then the requirement associated with that Object Number appears directly under it.

The Object Number becomes useful when questioning individual requirements. As oppose to questioning the Xth requirement on page XYZ you would just quote the Object Number.

Q.49. If one goes to the HVAC systems diagrams (81500 series), in this case page 5 of 5, this heat exchanger refers one to drawing 73500. If one goes to drawing 73500 page 3 of 3 (as this is the only drawing) the illustrated heat exchanger refers one back to drawing 81500 again. There is no specified model number provided for this heat exchanger ...? In addition page 3 of the Major Equipment List does not provide any reference to the heat exchanger adjacent to the relevant spec section.

A.49. The technical design package documents do not specify the necessary heat exchanger make and model, however drawing 73500 Machinery Cooling System Diagram does define the necessary characteristics of the required heat exchanger and as a basis for design RAL used Dometic Marine as an indicative heat exchanger as detailed in CS section 512.1.2 - Hydronic Heating. (note the CS has a typo as it states DomesticMarine). It is the responsibility of the

successful bidder to select equipment compatible with the requirements and the specifications.

Q.50. Our NA has the following question which I convey herewith for your response:

“The Marine Design Appraisal Documents provided from LR as part of the Class Appraisal process include some items identified as AQP (details to be submitted). Have these details been addressed and approved through CCG's design process?”

A.50. If the question is referring to DAD ADS-3123625-H-001 section 3, then the AQP is referring to the crane supporting structure and the window, door and hatches plan.

of An FEA has been completed on the crane supporting structure (RAL00265F-212-045-200 Rev. 1 Structural Analysis for the high Endurance SAR Lifeboat – Deck Crane Foundation), and has been submitted to and reviewed by LR as referenced in DAD ADS-3123625-H-004. Therefore, details of the crane supporting structure provided in 22010R5 Deckhouse Structure have been appraised by LR.

A window, door and hatches plan has not been created. Windows, doors and hatches are to be designed and procured as part of the contract but can be estimated as per the Construction Specification and as in 22010R5 Deckhouse Structure, 21050R4 Structural Sections, 21010R4 Structural Arrangement and 33000R3 Accommodation Arrangement Plan. A window list has been provided in Construction Specification 2.6.25.1, and for weight estimating purposes window thicknesses have been estimates as 5/8” for front windows and 1/2" for side windows.

Q.51. If there is a insulation drawing produced for these vessels, which we have not received?

A.51. An insulation plan has not been created. Insulation is to be provided as indicated in the Construction Specification section 2.6.35 Insulation Systems.

Q.52. If there is a windows, doors and hatches drawing and/or schedule , which also we have not received?

A.52. A window, door and hatches plan has not been created. Windows, doors and hatches are to be designed and procured as part of the contract but can be estimated as per the Construction Specification and as in 22010R5 Deckhouse Structure, 21050R4 Structural Sections, 21010R4 Structural Arrangement and 33000R3 Accommodation Arrangement Plan. A window list has been provided in Construction Specification 2.6.25.1, and for weight estimating purposes window

thicknesses have been estimates as 5/8" for front windows and 1/2" for side windows.

Q.53. After going thru the drawing package for the SAR Lifeboat, I have made a Door, Hatch, Window spread sheet for my assistance on quoting for this project.

After going thru the drawing I have noticed that there are only a couple measurements for a couple doors.

There are no measurements for the remaining doors, hatches and or windows. Without those dimensions there is no way to quote for this project.

On other projects like this we would see a schedule for the doors, hatches and windows with all the pertinent information.

If there is any way we could receive that information it would be appreciated to quote this project in a timely manner.

A.53. See answer to question 52

Q.54. The Construction Specification Design Drawing 90000 Integrated Communications and Navigation System Schematic depicts a very "non-integrated" sensor control and ship information system architecture with a variety of stand-alone sensor and system controls and displays to be installed. Would the Coast Guard be receptive to a proposal option that would offer a more mission efficient integrated display and control solution making greater use of the specified touch screen displays to reduce the number of unique controls and displays on the bridge? A more integrated control and display solution could increase operator effectiveness and improve system reliability and availability.

A.54. Yes, the Contractor may propose such a system for Canada's review. As indicated in note 1 of the drawing No. 90000, the Contractor is to provide an integrated communication and navigation system in compliance with the specification, equipment's manufacturer recommendation and to the satisfaction of the owner. For operational reasons, the schematic in Design Drawing 90000 depicts vessel controls as stand-alone, and navigation displays are depicted as integrated with ECDIS.

Q.55. Are companies other than shipyards allowed to attend the Bidders Conference as mentioned in amendment 13?

A.55. Yes. All companies are invited to attend the Bidders Conference.

Q.56. **Part 3, 3.1.2 Section II& Annex E-**

The tender states: "If an evaluation item expressly provides that it, or any element of it, may be met by a subcontractor to the Bidder, then the Bidder shall provide documented evidence of such compliance by its subcontractor."

Under Mandatory Technical Criteria the tender states to expressly provide for subcontractor capabilities for MTC 2 and MTC 3, however it does not expressly state to provide for subcontractor capabilities for MTC 3,5 or MTC 6.

Can you please confirm that Canada will accept subcontractor capabilities for MTC 3,5 & 6, meeting the requirements for subcontractors stated in Paragraph 3 of Annex E, as there are certain elements of these criteria categories that would fall under the subcontractor list requirements in the normal course of our business.

A.56. Canada will accept subcontractor capabilities for MTC 5 and 6, but not for MTC 3.

Q.57. We have noticed some differences between the electronic items shown in Annex A and the Master Equipment List. Please clarify the following requirements.

a) one document shows a Furuno FS1503EM and the other shows an ICOM IC-802. Do you have a preference?

A.57.a) The equipment listed in the Construction Specification takes precedence; therefore the equivalency demonstration must be done for the ICOM IC-802.

b) The ICOM IC-802 will also require an antenna coupler unit AT140 to make a full system. Please confirm.

A.57.b) Yes. It is the Contractor responsibility to provide a fully functional system.

c) Comrod AXBY refers to a series of MF/HF antennas. Is it okay to quote a comrod AT82 with flange mount end feed?

A.57.c) The Contractor is free to choose the mounting type for the installation.

d) The Motorola MT1500 and Astro XTL5000 have been replaced with newer models. Please confirm that it is okay to substitute?

A.57.d) It is acceptable to substitute with new or different models. The Construction Specification for both the MT1500 and Astro XTL5000 states "or equivalent". The meaning of "or equivalent is defined in RFP section 1.3.

e) The Furuno NX700 Navtex comes with an NX7 antenna. There is an additional line in the master equipment list showing NXH7. Do you need a second (spare) antenna?

A.57.e) No, a second spare antenna is not required.

f) The Iridium satellite telephone is not shown in the Master Equipment List. Is it required?

A.57.f) The list provided as part of the RFP is 1310 Major Equipment List R1 is not a "Master Equipment List". As stated, under "assumptions" of the 1310 Major Equipment List "...*only the major components of each system is listed, to complete installation additional minor equipment will be required.*" Therefore the 1310 Major Equipment List is not a complete list of the equipment required for the SAR.

g) The master equipment list only shows one Hatteland HD-19T-21 MMD display. However Annex A Object number 2.4.24.2.0-3 describes two. Can we assume that two are required?

A.57.g) As per drawing SAR90000R2 Integrated Communication and Navigation System, two displays are required. The 1310 Major Equipment List R1 should indicate two displays.

Q. 58. We, as a Canadian manufacturer of systems that could really well fit on these boats, are truly interested by this project. However, as none of our products are specified, we fall in the category "or equal".

This being said, we have been talking to some of the shipyards that are working on this project as well and at this stage, the yards do not have the time to ask the contracting authority if the systems we are proposing them are acceptable, and we understand them.

We would like to provide them with some confirmations / communications from Canada, reassuring them that their proposal will be receivable if they are using our products.

We are looking at three (3) different products for this project :

- Steering gear system;
- Bow Thruster;
- Propulsion controls.

The last product is straight forward and we see no problem with it. However, to make sure that the two first products are receivable by Canada, this would require a simple discussion with the Technical authorities.

As I said above, being a Canadian manufacturer (high Canadian content level), we deeply believe that we have interesting solutions for this project, but also we think that we can have Canada realizes economies using our products rather than some other that are specified in the documents, which are by the way not Canadian products either.

We hope that you can provide us with some help in this file.

A.58. Please see Question and Answer #47.

Q.59. Given that Canada is transferring full responsibility of the system (RFP Section 37) to the successful bidder, what must the bidder do when:

- a. A piece of equipment is listed in the RFP without any details and is not listed in the Construction Specification?
- b. A piece of equipment is listed in the RFP, a summary specification is included in the Master Equipment List, but the parameters and performances indicated in the Master Equipment List are not available from the manufacturer, therefore the equipment does not exist in the form specified by the Specification?
- c. A standard is included in the Specification, indicating that the vessel must meet it, but experts already predict that it will be extremely difficult to meet this standard?

A.59. The list provided as part of the RFP is 1310 Major Equipment List R1 is not a "Master Equipment List". As stated, under "assumptions" of the 1310 Major Equipment List only the major components of each system is listed, to complete installation additional minor equipment will be required. Therefore the 1310 Major Equipment List is not a complete list of the equipment required for the SAR. This equipment is only there as it was used as a design basis for the SAR and to provide the primary qualities/characteristics of the equipment, it is not meant to be the equipment used in the vessel. The Contractor must meet the Construction Specification. It is up to the bidder to determine the best equipment to use for the overall purposes of their submission.

In the case of discrepancies between documents, the equipment listed in the Construction Specification takes precedence.

Canada request that if there are specific questions with respect to specific portions of the technical package that the bidder ask these directly.

Q.60. For the crew training program and familiarization:

- a. Must the student guide (educational material) be provided in both official languages?

A.60.a. Yes, the student guide and training materials are required in both official languages in order to conduct training in accordance with DID-I002.

- b. Does Amendment #12 decrease the number of training sessions planned? There are currently 4, 1-week sessions planned (3 English and 1 French).

A.60.b. No, the number of training sessions to be provided by each contractor does not change as a consequence of RFP Amendment #12.

- c. For the initial training of the Deck Department and Engine Room Department (separate staff and training), must the enrollment of the curriculum occur during the same scheduled week-long period?

A.60.c. Canada does not completely understand the question as presented. In regard to "curriculum" and "enrollment", it is not necessary for Deck Department Familiarization Training and for Engine Room Department Familiarization Training to take place during the same 1-week period. In accordance with DID I-012, Training for each stream (Deck and Engine Room) shall nonetheless be one (1) week in duration and shall include Emergency Familiarization Training and General Familiarization Training. Canada clarifies that "one (1) week" means over five (5) consecutive days of approximately equal duration, and at least 35 hours total duration, with reasonable lunch and break periods included in this figure.

- d. Can the training location vary from one session to the next, or is it possible to plan for a single location?

A.60.d. Yes, this is possible as long as SOW Section 5.11.5 is met and, per DID I-012, familiarization training takes place aboard a fully operable SAR Lifeboat with adjacent classroom facilities.

- e. Is it possible to schedule all training sessions in succession?

A.60.e. Familiarization training must be scheduled in accordance with SOW section 5.11.3. and DID I-012. It is not possible to schedule all Familiarization training sessions in succession.

Maintenance training must be scheduled in accordance with SOW section 5.11.8. and DID-I-013. It is possible to schedule the English and French sessions in succession.

Q.61. The specification requires the magnetic compass to be located in the enclosed bridge with a remote readout in the flying bridge. The magnetic compass does not have a remote readout available but the magnetic heading can be seen on the operator panel of the Horizon MF which is mounted in the enclosed bridge. The best solution is to install the magnetic compass in the flying bridge. This way the magnetic heading can be seen in both locations. Please confirm this proposal.

A.61. Canada would accept this solution as long as it meets Classification and all Regulations and Standards as indicated in the CS.

The Construction Specification is modified to read as follows:

CS 2.4.26.3.1.0-2: The magnetic compass must be located in the enclosed bridge with remote readout on the flying bridge. Alternatively the magnetic compass can be located in the flying bridge with remote readout in the enclosed bridge.

Q.62. The specification calls for two ICOM IC-M604 radiotelephones but drawing 90000 shows one radio in the enclosed bridge and a remote unit in the fly bridge. There are two possible solutions. (A) the best solution is to install one IC-M604 radiotelephone in the enclosed bridge and another in the fly bridge. Separate antennas will be required for each radio. (B) A full function Command Microphone can be mounted in the fly bridge and connected to the IC-M604 radiotelephone in the enclosed bridge. Only one antenna is required in this case.

A.62. The specification and drawing 9000 have two ICOM IC-M604 VHF-FM radio telephones, each with its own antenna (Specification Section 441.4). As shown on drawing 90000, one ICOM IC-M604 VHF-FM radio is located in the enclosed bridge with a VHF remote unit located in the fly bridge and one ICOM IC-M604 VHF-FM radio located in the enclosed bridge and integrated with the wireless communication systems (Specification Section 430.2).

Q.63. This question keeps arising, stimulated by vendors we are approaching; that the RFP, along with answers to previous questions, state that the project definition specifications and drawings are for guidance, and that bidders are responsible for the suitability of components selected. We view this very problematic. Firstly that the Crown will have difficulty in evaluating apples for apples bids, secondly and more importantly, that in many cases engineering needs to be carried out to determine the suitability of many of these components, and components

“unspecified”. Not only there is a cost associated to this process, but there simply isn't enough time to conduct it given the bid closing timeline. Can you please confirm for all bidders sake, how we should be coping with this problem?

A.63. There is sufficient information within the technical package for bidders to make an appraisal of vessel equipment requirements. Answers 47 and 59 provide information in this regard.

Per Sec. 3.1.1 of the RFP, bidders must provide their Equipment, Material, Services Source List and Subcontractors List at time of bid submission and in the format stipulated to meet the requirements of MC2. However, although the bidder is required to submit these lists, the bidder's equipment selection choices are not an element of the bid evaluation. Canada will evaluate the Technical Bid in accordance with Sec. 3.1.2 of the RFP.

Canada does not expect that the bidder's engineering work to integrate the equipment into the vessel's design will be accomplished when the bid is submitted. The Statement of Work is structured to include a Design Check Phase, an Initial Design Phase and a Production Design Phase. Bidders should review the requirements of these phases to appraise their scope of work associated with each phase, and the nature and timing of the required deliverables.

Q.64. Can you please advise, "specify" an acceptable casting alloy for the propeller shaft struts. We have checked with Lloyds and they cannot provide this.

A.64. While no specific alloy is identified for the struts, drawing 52600 Stern Tube and Strut Arrangement defines the necessary requirements that the struts are to be cast steel with a UTS of 400MPa and is to be welded to the strut bossing which is ASTM A311 Class B round stock). Drawing 52600 Stern Tube and Strut Arrangement was reviewed by LR as detailed in document ADS-3123625-H-005. Alternatively, as indicated by the note on the drawing, that should the strut and strut bossing be cast as a single piece the UTS of the alloy will have to meet that of the bossing, which could increase the size of the strut and bossing design. It is the responsibility of the successful bidder to select a suitable alloy compatible with the requirements and specifications.

Q.65. With regard to DID T-503 "Auxiliary Systems Drawings and Calculations", can the Crown please advise if a 3D integrated drawing would be acceptable in lieu of individual 2D overlay drawings?

A.65. If what is meant by a 3D Integrated Drawing is a model (e.g. SAR50010R2 3D Machinery Arrangement.pdf), then no, at least not as the only submittal.

A model alone does not provide the detailed information required by DID T-503 (e.g. schematic arrangement including equipment, valve types, pipe sizes, flow directions, valve alignment (i.e. N/O, N/C, LS, etc.), instrumentation, symbols, notes, and materials; construction details; calculations; interfaces; and references, etc.) in a format for review and appraisal.

A 3D Integrated Drawing or model can be submitted in partial fulfillment of the requirements of DID T-203 Machinery Room Arrangement, especially in support of demonstrating that maintainability and supportability considerations are incorporated in the design (e.g. access for maintainers, removal routes, lay-down areas, handling equipment, etc.).

Q.66. In the drawing No. 91500 (Alarm and monitoring system diagram), there is a note: "Ensure alarm and monitoring systems comply with Lloyd's special service craft rules for a service craft or patrol vessel not intended to comply with HSC code and having an Unmanned Machinery Space"

Does it mean that the alarm and monitoring system doesn't have to comply with HSC code and doesn't have to comply with the Unmanned Machinery Space?

A.66. The Alarm and Monitoring System for the vessel does not have to comply with the High Speed Craft (HSC) Code. The Alarm and Monitoring System does have to comply with Lloyd's Register Special Service Craft (SSC) Code rules and regulations for Unattended Machinery Space(s). Note 1 on Drawing 91500 should have been written as: "Ensure alarm and monitoring systems comply with Lloyd's Special Service Craft Part 16, Chapter 1, Section 6 "Requirements for craft which are not intended to comply with HSC Code" and the requirements for Unattended Machinery Space(s)"

Q.67. The RFP indicates that no security is required (IE a bid bond) Please confirm that to be the case.

A.67. There is no bid bond for this solicitation, however evidence of Contract Financial Security is required, please see Part 6 Security, Financial and Other Requirements at 6.4 Security for Performance, Schedule "A" cost, and Annex "M" .

Q.68. Typically the P & I coverage is afforded as an extension of builders risk as long as it meets the limits required. Please confirm this is satisfactory to Canada in fulfilling the requirements of Annex F Part 1?

A.68. In fulfilling the requirements of Annex F Part 1, bidders are required to follow the Ship Builders Risk and Marine Liability Insurance which are different Policies for specific coverages.

Q.69. Under Annex "M" Part 1 a number of scenarios are presented. Which case does Canada prefer as we believe that option (c) cannot occur without option (A)?

A.69. Canada does not have a preference please refer to the Annex "M" for compliance.

Q.70. Section 1.2.1 Requirement Overview: Will the two construction contracts be authorized at the same time or does Canada expect that there will be a delay between the awarding of the first and second contracts?

A.70. Once the internal approval process and the licensing agreement has been completed, Canada intends on awarding Contracts at the same time to the two compliant highest combined rating of technical merit and price.

Q.71. Section MTC5: Classification Society identification. Considering the obligation to build the SAR Lifeboats as part of the Delegated Statutory Inspection Program by Transport Canada as a Recognized Organization (RO), in what way does the identification of the Classification Society constitute a mandatory criteria for the evaluation of proposals? Will Canada accord a distinct preference to each RO?

A.71. To meet the requirement of MTC 5, the bidder must identify in its proposal the Classification Society it intends to use during the vessel construction. The Classification Society must be a Recognized Organization (RO) under Transport Canada Marine Safety (TCMS) Delegated Statutory Inspection Program (DSIP). Canada will not accord any preference to the bidder's choice of Classification Society in the bid evaluation.

Q.72. Within drawing SAR21010R4 Structural Arrangement.pdf, Detail P shows the "Hydrodynamic Interceptor". The Construction Specification does not contain any detail on this item, what is required from the Contractor?

A.72. The contractor is required to procure and install hydrodynamic interceptors as indicated in SAR21050R4 Structural Sections, SAR21010R4 Structural Arrangement and 212-045, CFD Analysis of SAR Lifeboat R1.

The construction Spec will be amended to include the following section, 2.1.14.6 – 114.5 Hydrodynamic Interceptors.

2.1.14.6 – 114.6 Hydrodynamic Interceptors.

2.1.14.6-1 Reference: Drawing - 21010 Structural Arrangement

2.1.14.6-2 Reference: Drawing - 21050 Structural Sections

- | | |
|------------|--|
| 2.1.14.6-3 | The vessel must be fit with hydrodynamic interceptors located as per Construction Specification Design Drawings. |
| 2.1.14.6-3 | The interceptors must be two (2) HAE 650 and two (2) HE 1250 Humphree, or equal. |
| 2.1.14.6-4 | The vessel must be fit with one (1) Automatic Trim Optimisation System (ATOS) , or equal. |

Q.73. We are working hard to complete our proposal for the F7047-141000/C tender. We would need however an extension to be able to submit a complete and detailed bid.

So my question goes as follows: Is it possible to extend the closing date of the F7047-141000/C Tender?"

A.73. Your question is noted and Canada has extended the bid closing date from February 26th, to March 12th, 2015.

Q.74. In the response to SARL Letter of Interest, March 2014, we had suggested that a 3 to 4 month time will be allocated for the future SARL Bid preparation. In the current RFP Canada had allocated 3 calendar months, November 25, 2014 till February 26, 2015. Considering the RFP is a body of information counting 818 pages and that during this period there was a Christmas recess observed by most, we hereby request Canada to extend the present Bid submission deadline by two weeks.

A.74. Please see question and answer #73.

Q.75. PART 5 – CERTIFICATIONS. 5.1 states "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". However Government of Canada website states the following under 4.45.1. Code of Conduct (Certification) "*The content of this section was reviewed and moved to section 4.21 Integrity Provisions.*" *But there is no any reference in 4.21 to Code of Conduct Certifications. Further on 5.1 states "The related documentation therein required will assist Canada in confirming that the certifications are true" Can Canada clarify exactly what documentation is required to fully satisfy requirement 5.1?*

A.75. As per Part 5 Section 5.1., please follow the instructions of clause 2003 under section 01 (2014-09-25) Integrity Provisions – Bid, this is Mandatory Certifications Required Precedent to Contract Award.

Q.76. Can you confirm the duration of the validity of the proposals that will be submitted?

A.76. As per the RFP Part 2 – The bids will remain open for 180 days. At the Bidder Instructions Section 2.1 Standard Instructions, Clauses and Conditions (2003), Sub-section 5.4, it was amended from sixty (60) days to one hundred and eighty (180) days.

Q.77. Based on what was discussed at the bidders' meeting and taking into account the research that we must do to provide a competitive bid to Canada, would it be possible to have a further one-month (four-week) extension for submitting proposals?

A.77. Please see question and answer #73.

Q.78. Further to Q and A 36. It doesn't make sense to have only one rate. Considering the nature of the work for this project, the rate for engineering work must absolutely be separate from the rate for production work. We suggest that you allow us to enter two rates?

A.78. Your comment is noted and remains unchanged. As per RFP Part 7 section 25.1 Basis of Payment and at Schedule "A" Cost, this blended rate is only to be used for any Design Change Requests that may arise throughout the contract and must be approved by the Contracting Authority.

Q.79. Has Canada taken into account the ice season in the St. Lawrence with respect to the delivery schedule? Has any consideration been made for ice restrictions during tests and trials in the winter season?

A.79. A schedule is requested from bidders at MTC1.2 and Part 7 section 11, these predetermined delivery dates would be known in advance of the tests, trials and delivery during the winter months with ice restrictions. Canada will also be working closely with both winning contractors with their final schedule.

Provisions for excusable delays are stated in the contract under General Terms and Conditions 2030 section 11 Excusable delay.

Q.80. Question was asked if a Letter of Credit or a form of parental guarantee would be sufficient this is request?

A.80. In accordance with Part 6 section 6.4 Security for performance, Part 7 section 22.0 Contract Financial Security and Annex M Contract Financial Security, the list is provided in Part 1 of Annex M.

Q.81. Regarding the cost column on the Equipment List (Annex D). This document is to be supplied with the technical package Section 1, MC2. In accordance with the submission guidelines no financial information is to be provided with the technical package. May we please be provided confirmation that the cost column should be removed?

A.81. The Equipment List (Annex D) is to be supplied in accordance with 3.1.1. Section 1 – RFP Response and Certifications – Mandatory Criteria (MC), MC2 Equipment, Material and Services Source List and Subcontractors List.

Q.82. Regarding the current requirement of IMO II emissions for the propulsion engines as stated in Q+A #19, would the Crown wish to set the minimum emissions requirement to EPA Tier 3 as this would enable a more environmentally friendly fleet of lifeboats?

A.82. Your question is noted, however the modifications to the Construction Specification as outlined within Answer #19 remain.

Q.83. Object number 2.2.33.2.0-1 (page 91 and 92): Caterpillar C32's have been listed with alternates of MTU 12V2000M84 and MTU 10V2000M94. In our opinion, the MTU10V2000M94 is not an equivalent to the C32. For example the C32 is a 32L displacement engine whereas the 10V2000 is only 17.8L. Furthermore, the highest output from our 18L engine (C18) is 1136hp while the 10V2000M94 output is substantially higher at 1600hp. Although the MTU design is different, the concern we have is that the 10V2000M94 engine will be strained at such a high performance rating that Crown may not receive the reliability it requires from such an application. The MTU 12V2000M84 would be a closer "equivalent" to the C32 since it is listed at 26.8L displacement.

A.83. Your comments and question are noted, however CS object #2.2.33.2.0-1 remains unchanged.

Q.84. Article 2.5.85.3-1. The specification requires that a Palfinger PC2700MA or equivalent crane be provided. The specification also states that the boat must be deployed and recovered in up to SS 4 conditions. Our supplier of Palfinger cranes has told us that the crane specified cannot meet the lift capacity at the maximum reach requested to deploy and recover the boat in SS 4 conditions. From what we can see, a structural analysis was conducted using the Palfinger crane specified in the Specification.

Was the capacity of the crane (reach and lift for SS 4 conditions) used in the study validated by Palfinger?

Does Robert Allen have any documentation from Palfinger to confirm that the Palfinger crane can meet the required lift and reach requirements in SS 4 conditions?

How would Canada like to address this issue? Will you revise the crane requirements to require a crane with a greater lifting capacity or will you reduce that the lifting capacity requirements to allow the Palfinger crane to be used?

A.84. The requirements in the technical package will not be revised. The specific lifting capacities and conditions required for the crane are detailed in Design Drawing 40100 pg. 6 of 7

Q.85. We are having no luck in sourcing a suitable casting material for the shaft struts to meet the spec and drawing provided by RAL. Two foundries have in fact declined to have any involvement.

The one foundry I'm dealing with which does a significant amount of marine casting work has suggested the following, which were made and met Lloyds:

lbs "As I mentioned we made a number of drive line struts for Palmer Johnson, for the PJ 135 motor Yacht. It was certified by Lloyds. The engines were MTU 16V4000 M90. Outside bearing diameter was 6.125". The material used was cast Aqualoy 22, UTS 85,000 psi. I believe each strut weighted 323 kg or 710 per."

Can you please advise if this same material would be acceptable as it is a stainless steel and more compatible with an aluminum hull anyway?

A.85. Canada cannot answer this question of acceptability/equivalency at this time as without being able to assess this in relation to the Bidder's proposed design, as there are many variables involved in making this determination. Consequently, during the Design Check Phase, per SOW Section 2.11.1.: "The Contractor shall bring to the attention of Canada all problems, omissions, errors, or inconsistencies with the design. The Contractor shall then submit to Canada recommended procedures and changes in order to correct the aforementioned problems, omissions, or inconsistencies. Adoption and implementation of the recommendations is subject to acceptance by Canada in writing."

Instructions to the Contractor for proposing to Canada the substitution of articles, material, or equipment are contained in RFP Part 7, Section 1.3.

Q.86. a) The windlass specification indicates that it must be driven by a hydraulic motor and that it must have a manual recovery mode. All the manufacturers

contacted indicate they do indicate not offer a manual recovery mode. Can
Canada clarify what is required?

A.86. a) It was not intended that the requirement state that the capstan must have a manual means of raising the anchor, but that the capstan must be able to be locked so that it can be used as a hard point if necessary to raise the anchor.

The CS will be amended as to read as follows:

Object #2.5.83.4.0-3, The windlass must be fitted with a hydraulic motor drive with clutch, complete with positive locking feature for use in event of clutch failure and ~~manual retrieval mode~~ the anchor windlass must be capable of being locked to facilitate manual retrieval of the anchor.

Q.86. b) Is it possible to know the speed and capacity required of the anchor windlass?

A.86. b) CS RFP uses the Hawboldt AWW-0.375 anchor windlass as the indicative equipment. Drawing 40100 Deck Machinery and Fittings Arrangement indicates the indicative anchor model, the rope diameter and the rope length intended to be used, and Drawing 75500 Hydraulic System Diagram specifies the hydraulic demand of the anchor windlass. Canada does not have a specific speed for the anchor windlass as this will depend on the exact equipment selected by the bidders and will be rationalized during the vessel design.

Q.87. The hydraulic schematic identifies that the closed loop pump is to be mounted in tandem with a clutch, given the nature and type of pump required is it possible that the pump can be mounted directly without a clutch? If not, what type of clutch is required?

A.87. The requirement for a clutch is not in the technical data package as it is not a specific design requirement. The clutch is included as part of the closed loop system in drawing 75500 as it is a way to remove any unnecessary parasitic loads on the engine as the bow thruster is only used during low speed operations. It is the responsibility of the bidder to select equipment for the vessel that meets the vessel's requirements and is compatible with the overall vessel design. It is expected that the requirement for a clutch would be discussed and rationalized during the design phases of the contract, when the successful bidder is integrating the selected equipment into the design.

Q.88. Canada's clarification on A.#19.

A.88. The diesel engines installed in all vessels for the contract must meet or exceed the Tier II requirements for exhaust emission limits defined by MARPOL, Annex VI, Regulations for the Prevention of Air Pollution from Ships.

Q.89. As we have previously stated, it is a huge undertaking to respond to this RFP properly. In addition some of us have travel plans previously made that overlap the RFP time. As a question to the bidder's conference, we requested an extension of at least one month. We now respectfully request an extension to at least March 27.

Quite frankly we don't understand the urgency to receive bids for the project understanding that Canada currently does not know when a contract could be placed.

A.89. Your question is noted and the Bid closing date has been amended, please see Q and A #73.

Q.90. As stated previously on several occasions from our experience we believe the required deliveries of the second and subsequent vessels are unrealistic. Understanding that Canada to date has not amended the required delivery dates, could you please advise the contractual consequences of late delivery.

A.90. Please see revised schedule attached at Amendment #23.

Q.91. The following is a question regarding the abovementioned request for proposals.

In reference to question no. 38, is the contractor required to provide a vessel that will maintain a speed of 23.5 knots in the load condition stipulated in the specifications and in force 2 environmental conditions on the Beaufort scale? If so, the only way to accurately predict the hydrodynamic characteristics of this type of vessel is to conduct hull tank trials.

The results detailed in RobertAllan's CFD report may be questionable. However, source data from the study, model details and calculations are not available for the contractor's review. Furthermore, there is a substantial difference in displacement between the Severn type vessel and RobertAllan's design, and any correlation between their respective hull strengths will automatically entail a significant margin of uncertainty and be difficult to quantify.

The contractor therefore cannot be held responsible for the vessel's speed based on the results of these predictions.

Seeing as two shipyards will be selected, should Canada not provide reliable data based on hull tank trials so that the design verification step can be carried out within the limited 45-day timeframe?

A.91. The methodology and results of the RAL report are clearly described therein. It is acknowledged by Canada that there is a substantial difference in displacement between the Severn type vessel and Robert Allan's design; however, CFD simulations were undertaken on the Severn Class hull form to confirm that the CFD techniques used for the analysis would provide an accurate prediction for the RAL design. The CFD simulations of the Severn Class were not compared to those of the RAL design. Canada is confident in RAL's CFD modelling. For the purposes of responding to the RFP, all bid proposals should proceed under the assumption that there will be no issues with RAL's CFD modelling or with the powering and resistance data provided by RAL for the design of the SAR Lifeboat.

Q.92. Item 2.1.67.2.1

French specification calls for: Elles doivent être fabriquées en acier inoxydable avec un verrou de sécurité interne permettant de sortir, mais pas d'entrer.

English specification calls for: Escape hatches must be provided with an all stainless steel, internal security lock to enable escape, but not entry.

When english specification ask for stainless steel security lock only, french specification ask for a complete stainless steel hatch with a security lock.

This makes a big difference on the price.

I would imagine the english specification is right, but could you please confirm? This makes us nervous about the translation of the entire specification...

A.92. The English specification is correct. Only the internal security lock must be stainless steel.

The French Specification is modified to read as follows:

2.1.67.2.1 Escape hatches must be provided with an all stainless steel, internal security lock to enable escape, but not entry.

Q.93. Here are a few questions we need clarification on. Please and thanks!!

Document number---2.3.30.3.0-2surface or flush mount?model?voltage?wattage?

Document number 2.3.30.3.0-3 surface or flush mount? Model? Voltage? wattage?

Document number 2.3.30.3.0-5 surface or flush mount? Model? Voltage? wattage?

Document number 2.3.30.4.0-1 surface or flush mount? Model? Voltage? wattage?

Document number 2.3.30.5.0-1 surface or flush mount? Model? Voltage? wattage?

Document number 2.3.30.5.0-2 the 25W emergency equivalent is 25W LED, 25W Fluorescent or 25W Incandescent? are these to be emergency lights or non-emergency? what is the number 175?

Document number 2.3.30.5.0-3 the 75W emergency equivalent is 75W LED or 75 Halogen or 75W HID equivalent? what voltage?

Document number 2.3.30.6.0-3 how many control stations?

- A.93. The technical design package defines the necessary characteristics of the equipment and material . Where there is a requirement for equipment that has no explicitly defined performance requirement, the successful bidder will be expected to select and integrate equipment that can meet the requirements of the specific system. Canada does not expect that the bidder's engineering work to design the systems and integrate the equipment into the vessel's design will be accomplished when the bid is submitted. The Statement of Work is structured to include a Design Check Phase, an Initial Design Phase and a Production Design Phase for this purpose. Bidders should review the requirements of these phases to appraise their scope of work associated with each phase, and the nature and timing of the required deliverables.

With respect the specific questions asked:

Questions related to surface or flush mount light fixtures: Canada clarifies that a flush mount light fixture is the same as a recessed light fixture defined in technical data package.

Questions related to voltage of light fixtures: The bidder should review the 6000-R4 Electrical System one-Line Drawings and 60152-R5 Electrical System Load Analysis to determine the required voltage level.

Questions related to wattage of light fixtures: The Contractor is expected to design the system to meet CS requirement 2.3.30.3.0-1 and Regulatory requirements.

Questions related to model: The contractor is required to select equipment which meets the CS requirements.

Questions related to the emergency lights: Canada clarifies that wattage in the requirements refers to a light output based on an incandescent bulb, and all lights detailed in section 2.3.30.5 refers to Emergency Lighting.

If the question regarding the number 175 refers to the number in the lower right corner of the page, then it is the page number of the Construction Specification.

Questions related to the number of control stations: The Bidder should review drawings 91000R2 Control System Schedule and 34000R2 Control Position Arrangements.

Q.94. We take note of Question / Answer # 86, which is one example of specification ambiguities that we were about to question ourselves .

Equipment typically throughout the specification also states "or equal to".

The problem is many pieces of equipment specified are provided with a particular vendor model number only, but no performance requirement specification. This makes it impossible therefore to obtain an "equal to" component from an alternate vendor.

Can the Crown please therefore advise how bidders are to source "equal to" parts under these circumstances?

A.94. The technical design package defines the necessary characteristics of the equipment and materials. Where there is a requirement for equipment that has no explicitly defined performance requirement, the successful bidder will be expected to select and integrate equipment that can meet the requirements of the specific system. Canada does not expect that the bidder's engineering work to design the systems and integrate the equipment into the vessel's design will be accomplished when the bid is submitted. The Statement of Work is structured to include a Design Check Phase, an Initial Design Phase and a Production Design Phase. Bidders should review the requirements of these

phases to appraise their scope of work associated with each phase, and the nature and timing of the required deliverables.

It is Canada's expectation that for the bid, the bidders will use their experience in systems engineering and in vessel design and construction to develop their competitive estimate for this contract.

Instructions to the Contractor for proposing to Canada the substitution of articles, material, or equipment are contained in RFP Part 7, Section 1.3.

Q.95. MAN Diesel & Turbo Canada has a technically compliant solution for this RFP.

We have endeavored to bring this to bidding yards, but they have indicated that because we are not MTU or CAT that they will not look at this as a competitive solution. Currently we understand that the bid states CAT, MTU or equivalent. And we do realize that the term equivalent should be adequate to provide for MAN to enter into this competitive process. However, bidding yards are reluctant to move forward with anyone but the named products in the RFP.

Therefore, we respectfully request that MAN be added to the named products listed in the RFP thereby opening up the opportunity to initiate discussion and proposed our compliant and cost effective solution.

A.95. The equipment specified in the technical data package is not a complete list of the all of the equipment that can be used in the vessel's design, nor is it intended to stipulate the exact equipment that is to be used in the vessel's design. This equipment is only there as it was used as a design basis for the SAR and to provide the primary qualities/characteristics of the equipment. It is not meant to be equipment that must be used in the vessel. The Contractor must meet the Construction Specification. It is up to the Bidder to determine the best equipment to use for the overall purposes of their submission.

Q.96. I am glad someone asked question no.84 but I am not pleased with the answer.

The crane specified and for which Robert Allan Ltd conducted an extensive report does not meet the requirement of Sea State 4 according loading chart requested in Drawing 40100 p 6 of 7. To meet Sea State 4 requirement, the crane will be bigger, heavier (almost twice the mass of PC2700MA), with a larger base (which as no relation to the extensive report that RAL provided), the hydraulic capacity will not be the same (pressure and flow).

Could Canada provide an answer that will highlight the necessary requirements and that will have everyone quote a similar supply, since we are in a competitive bid.

While we are talking about the crane specification :

2.5.85.3.1.0-7.0-3 Cylinder piston rods made of 316L SS are not available unless custom manufactured and will void manufacturer warranty. In fact they are more likely to get scratch and damaged than standard chromed piston rods.

A.96. Please see Question and Answer #84. Your question is noted, however the requirements as listed will not be revised. Canada cannot answer the question of inconsistency on this matter without being able to review the Bidder's correspondence and calculations in detail. If there is a defect or deficiencies in the technical data package provided by Canada, then during the Design Check Phase, per SOW Section 2.11.1.: "The Contractor shall bring to the attention of Canada all problems, omissions, errors, or inconsistencies with the design. The Contractor shall then submit to Canada recommended procedures and changes in order to correct the aforementioned problems, omissions, or inconsistencies. Adoption and implementation of the recommendations is subject to acceptance by Canada in writing." The subject of design defects and deficiencies is further addressed in Section 6.0 of RFP.

The comment regarding the cylinder piston rod material is noted. CS 2.5.85.3.1.0-7.0-3 is unchanged

Q.97. Object Number 2.2.33.1.0-7 "The diesel engines must be fit with "return to idle" capability that returns the engine to idle in the event of vessel capsizing. This feature must be triggered at a vessel roll angle of 70 degrees" Would an engine shutdown with automatic restart after roll angle is less than 70 degrees be an acceptable alternative to the engine returning to idle?

A.97. Engine shutdown with automatic restart is not an acceptable alternate to the return-to-idle requirement as identified by Construction Specification Object #2.2.33.1.0-7.

Q.98. Object Number 2.2.33.1.0-8 "The diesel engines must be capable of operating at idle for short duration with the vessel at high inclination angle or completely inverted" Can you quantify "short duration" in seconds or minutes that the engine needs to be capable of running at idle?

A.98. CCG does not have a specific time requirement for the duration for the engine run at idle, however the engine will need to run at idle throughout a capsize event estimated to be a maximum of 10 seconds as the engines will be fed solely by fuel remaining in the pipes.

Q.99. With respect to the production drawing review period, will Canada allow the Shipyard to proceed with production while waiting for Canada to review the drawing?

A.99. Canada replies that there is a difference between the drawings that are required as an element of the Technical Baseline (required before the Production Design Review Meeting, per SOW Sec. 3.10.3.), and production drawings.

The Contractor cannot proceed into construction of the Vessel(s) until Canada has accepted the Technical Baseline, per Sec. 3.10.1. of the Statement of Work (SOW).

The make-up of the Technical Baseline is described in SOW Sec.2.13., and does not include production drawings.

Per SOW Sec. 4.5.2., The Contractor must provide Canada with digital access to all production drawings for viewing and information purposes.

Q.100. Both CCG painting and insulation standards were mentioned in the RFP package. Bidder requested Canada to provide these two standards.

A.100. There are no CCG specific insulation standards. Paint standards will be provided.

Q.101. In the Construction Specification on Habitability Vibration, 1.73.3 ISO 6954:2000 was required to be complied with, what is Canada's requirement for test and trial that shipyard will measure against the ISO standard?

A.101. To clarify, vibration levels for the Steering Gear Compartment; the Engine room; the Survivor Space; the Fore Cabin; the Bridge (or enclosed wheelhouse); and Flying Bridge shall not exceed Classification C in the ISO 6954:2000 standard. The CS is amended to read as follows:

1.73.3 073.3: Habitability Vibration

Object Number : 1.73.3.0-1: Habitability vibration limits must comply with ISO 6954:2000; ~~Grew spaces—Maximum vibration levels.(deleted)~~ **Classification C** (added)

Object Number : 1.73.3.0-2 (DELETE THIS OBJECT ENTIRELY)

~~Note—There are no passengers on this vessel. Survivors are considered supernumeries and supernumeries are part of the crew. (deleted)~~

To clarify the tests and trials requirement for vibration levels, Annex B – Inspections, Tests and Trials is amended to read as follows:

1.2.2.2.8. Noise and **Vibration** (added) Test

The Contract must take and report noise **and vibration** (added) measurements during sea trial for the following areas:

- a. Steering Gear Compartment;
- b. Engine room;
- c. Survivor Space;
- d. Fore Cabin;
- e. Bridge (or enclosed wheelhouse); and
- f. Flying Bridge.

The number and location of measurements shall be sufficient to define the area's noise **and vibration** (added) characteristics.

The noise measurements and reporting must be in accordance with IMO Resolution A.468(XII), Code on noise levels on board ships.

The vibration measurements and reporting must be in accordance with ISO 6954-2000, Mechanical vibration – Guide for the measurement, reporting and evaluation of vibration with regard to habitability on passenger and merchant ships. (added)

The Contractor can propose alternate procedures and report format for review and approval.

Q.102. In the CS object # 2.1.1.12.0-3 there is a requirement for additional radiographic photographs for Canada. To what standard does Canada expect these to be as there are 4 levels in the ISO standard?

A.102. The CS is amended to read as follows:

Section 2.1.1.12

Object Number 2.1.1.12.0-2: The Contractor must carry out NDT to Class requirements. Weld acceptance must be evaluated as defined in ISO 10675-2:2010 Non-destructive Testing of Welds - Acceptance Levels for Radiographic **Testing Part 2: Aluminium and its alloys, Acceptance Level 2** or (added) and (deleted) Class rules, **whichever is the more stringent.** (added)

-276Object Number 2.1.1.12.0-3: In addition to Class requirements, the Contractor must provide the services of a certified radiographer for a total of twelve (12) radiographic photographs (X-rays) of welds. These X-rays will be considered Canada's X-rays over and above those required by the Classification Society. **These x-rays will be to the standard determined for the x-rays required in 2.1.1.12.0-2.** (added)

Q.103. CS object #2.2.33.3.0-4 states that "The diesel engines must be fitted with intake air silencer, mounted external to the air filter." Are these silencers required?

A.103. The requirement for the engine intake silencer was meant to indicate an acoustic treatment solution that could be used to meet airborne noise level requirements and is not a hard requirement.

The CS is amended to read as follows:

Object Number 2.2.33.3.0-4: ~~"The diesel engines must be fitted with intake air silencer, mounted external to the air filter.[deleted]"~~

Q.104. CS object #2.2.33.2.0-2.0-3 states that leak oil pressure and temperature gauges are required, however this requirement seems specific to high pressure fuel injection systems (such as common rail), and would not be applicable to all fuel injection systems. Can this be clarified?

A.104. Leak oil pressure and temperature gauges are necessary where available.

The CS is amended to read as follows:

Object Number 2.2.33.2.0-2.0-3 3): Pressure and temperature gauges for lube oil, charge air, jacket water, leak oil (**where available**) (added), starter air, fuel delivery;

Q.105. Questions were raised with respect to the requirements for stainless steel and counter-rotating bow tunnel thruster propellers. Can these requirements be relaxed to allow other proposals that meet other requirements?

A.105. The requirement for counter rotating propellers will be deleted and a performance specification for the amount of thrust to be generated will be added to the Construction Specification.

The requirements that the propeller and gear housing be made of stainless steel will be deleted in order to allow aluminum and CuNi, however object number 2.5.70.0-11 remains "Bow thruster components exposed to sea water must not be fabricated of bronze or brass."

The CS is amended to read as follows:

Object Number 2.5.70.0-5: The Vessel must be fitted with a tunnel type, hydraulic driven, fixed pitch, ~~counter-rotating~~, (deleted) bow thruster designed for efficient operation for vessel manoeuvring, Westmar V2-16NS or equal. The propeller must be designed to minimize cavitation and pulse induced vibrations in the hull.

Object Number 2.5.70.0-6: The bow thruster must provide a minimum of 45 kW at rated power **and produce approximately 6.0 kN (1350 lbf) of thrust.** (added)

Object Number 2.5.70.0-6.3-0 2): a multi-bladed fixed pitch propeller of ~~stainless steel material~~, (deleted) with blade finish to ISO 484 Class II;

Object Number 2.2.70.0-6.0-5 4): a gear casing ~~made of stainless steel~~, (deleted) with galvanic isolation where required;

Q.106. Could Canada clarify its requirements for marking(s) on the shell for the main watertight/oil tight bulkhead?

A.106. The CS is amended to read as follows:

Object Number 2.6.3.1.2 603.3.1.2 - Bulkhead, Thruster and Tank Marks

~~Main watertight and oil-tight bulkheads must be marked on the shell.~~

~~Location of fuel oil tanks must be marked on the shell.~~

~~The location of the bow thruster must be marked on the shell above the highest draft mark.~~ (deleted)

Q.107. CS object #2.5.64.2.0-11 states that "digital/hydraulic helm pumps" are required. However this requirement is patented by a specific manufacturer and there are other means of achieving the same functionality. Is this in fact required?

A.107. In order to provide flexibility to the bidders, the digital/hydraulic helm pumps detailed in CS are not specifically required.

The CS is amended to read as follows:

Object Number 2.5.64.2.0 9): **hydraulic or** (added) digital/hydraulic helm pumps