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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
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Issuing Office - Bureau de distribution

Ship Construction, Refit and Related
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Gatineau

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K1A 0S5

Title - Sujet NSFRV Build	
Solicitation No. - N° de l'invitation F7013-220306/A	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client F7013-220306	Date 2022-11-01
GETS Reference No. - N° de référence de SEAG PW-\$\$MC-040-28811	
File No. - N° de dossier 040mc.F7013-220306	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2022-11-28 Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Deslauriers(MC Div), Stephane	Buyer Id - Id de l'acheteur 040mc
Telephone No. - N° de téléphone (819) 420-2899 ()	FAX No. - N° de FAX (819) 956-0897
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 4 is raised to answer Bidders' questions during the solicitation period. New questions and answers from Q24 to Q30.

DELETE: Annex E Bidder's questions and Canada's responses in its entirety

INSERT: The following Annex E Bidder's questions and Canada's responses

ANNEX "E"

BIDDER'S QUESTIONS AND CANADA'S RESPONSES

Q1. In connection with the scope of the project and in order to prepare a bid that will meet Canada's expectations, an extension of the bid submission date is requested. A 45-day extension is requested, which would be adequate in the perspective that the main suppliers respond within acceptable deadlines.

A1. In order to fit all the procurement activities before the winter break Canada agrees to extend the closing date to November 28, 2022.

Q2. The first two lines of the Cost Breakdown table in Annex B refer to the SOW section 7.1.6 while the description refers to the structure. Can this table be detailed, namely what is expected in connection with it?

A2. Section 7.1.6 makes no connection to the structure or associated table. On the other hand, Section 7.1.6 clearly states that before the Production Engineering Phase (1C) can proceed, the Contractor must complete the Design Development Completion Phase (1B) by completing the DED T-005 Technical Reference Base.

Q3. See below.

- a. The specification for the Fixed-Gas indicates it must be suitable for Class D fire. Please confirm the type of metal to be protected.
 1. Note: the lithium contained in Li-Ion batteries is not considered a Class D hazard and therefore does not need to be protected as if this is a Lithium fire.
- b. Are alternative solutions for Total flood systems acceptable, i.e., such as the extension of the water-mist system to other areas.
- c. The specification does not describe any Gas Detection requirements for the two battery compartments. Has this been considered as part of the requirements for battery storage rooms?
- d. What are the volumes of the protected spaces, please provide Gros and Net volumes for these spaces
- e. item 4789 for Fire Detection, the requirement indicates that the FDS must indicate the Fan shutdown status, if this is provided to the SCMS is it still a requirement of the FDS? The FDS by class rules does not have to display 3rd party system status when this is achieved via other integrated systems.
- f. Item 4795 for Fire Detection, the requirement indicates that the FDS must be connected to the VDR, class rules allow for this connection to be via the SCMS when the SCMS is integrated with the FDS. Is this an acceptable alternative arrangement?
- g. Item 4794 for fire detection, the requirement indicates the FDS must interface with the PA/GA, please confirm if this is to activate the PAGA or if this is for the PAGA system to silence the FDS outputs
 1. Further, class requirements allow for a potential free contact to be provided from the FDS to activate the PAGA when the PAGA provides all audible signals for fire alarm indication.

Please confirm if the PAGA system will also be used to generate the fire alarm tone for the vessel. Where the PAGA is responsible for the fire alarm indication, separate audible circuits from the FDS are not required.

- h. Item 4790/4798 for fire detection, the requirement is to provide visual signals for high noise areas, please confirm if it is acceptable where the Signal Alarm Columns are fitted by the SCMS integrator that the alarms from this system satisfy this requirement OR is the requirement to still provide separate individual signals from the FDS.
- i. Item 4803, 4804, 4805, 4806 for fire detection, the requirement is to show the location of these devices. Is the intent of this spec item to simply have indication via text on the HMI or is the intent to have this shown as a graphic overlay of the Vessel showing the exact location of each device?
 - 1. Note, this can be achieved and is acceptable to class to be provided by the SCMS, is this an acceptable alternative where the SCMS has this capability. This is how the arrangement has been done on the OFSV and OOSV class vessels.
- j. Item 4808 for fire detection, the requirement indicates that information must be provided for the fixed fire system releases. Is the intent to indicate that the fire detection system must have control for the release of the fire suppression systems or simply indication?
 - 1. Typically, class only accepts indication and release for fire systems such as local application water mist systems
- k. Please confirm the hazard rating of the Battery Compartments, are explosion proof and/or intrinsically safe devices required in the battery rooms.
- l. 6485 for Fixed gas fire suppress and 523 Water-Mist, is it acceptable to only use one single solution for this compartment? Water mist is acceptable as a method to extinguish Battery fires but this specification suggests multiple system types as a solution. Is the intent of this project to have the fixed gas automatic and the water-mist manual only?
- m. Please confirm the water capacity of the technical or potable freshwater tanks, what capacity is available for 30minute run time of the water-mist system.
- n. Item 523 for Water-Mist, is there a backup sea-water connection available and what is the working pressure of the fire main
- o. Item 523 for Water Mist, what is the available power for the water mist system?

A3. The technical design package defines the necessary characteristics of the systems, equipment and material to the extent necessary for the bidder to understand design and determine the work required to complete the design. Where the requirements for a system are not explicitly defined, it is the Bidder's responsibility to perform this type of detailed systems development and integration and to meet the requirements of the technical specifications. The Statement of Work is structured to include the necessary design phases to review the design information provided and subsequently complete the design development.

Q4. A Bidder requested an extension of (3) months to the November 28, 2022, closing date to be able to submit a bid on this project.

A4. Canada cannot extend the closing further due to other procurement activities that are linked to this activity.

Q5. For phase 1A is it the intention of CCG that the Contractor complete a full design check or is this task to ensure that the Contractor understands the point of development that the design is currently at? At which point does the Contractor take responsibility for the design of the NSFRV?

A5. As per SOW Section 7.1.2: "The purpose of Phase 1A is to review and understand the design development to date. No design advancement will occur during Phase 1A." To this end the winning contractor must perform the Design Review in accordance with the Contract and ensure that the equipment the bidder has proposed for integration in the design and the engineering for the production of the vessel will enable the vessel to meet the estimated performance criteria.

If there is a defect or deficiencies in the technical data package provided by Canada, then during the Design Review Phase, per SOW Section 7.1.3 : "The Contractor must use the change process in accordance with DID M-006 Configuration and Change Management Plan if they determine that specific requirements or design aspects need to be revisited for producibility or fabrication standpoint. The onus is on the Contractor to rationalize the issue. Once understood and accepted by Canada, the Contractor is responsible for developing a solution. Canada will review and may accept the solution.." The subject of design responsibility is further addressed in Section 7.36 i of RFP.

Q6. As the contract design drawing package has been sent to Lloyd's for review (Section 6.1) if the Contractor decides to go with Lloyd's as the Class society will the reviewed/approved drawings along with the Lloyd's comments be provided?

A6. The reviewed/approved drawings along with the Lloyd's comments will be provided to winning bidder upon Contract award.

Q7. In Section 9.1 it states the scope of equipment to be provided by the pre-determined SSIs (AKA and Hawboldt) is available is Appendix 1 to Annex A. Can you please provide Appendix 1 as it was not included in the tender package?

A7. The scope of the equipment supplied is outlined in the Master Equipment List that we added to the TDP (last column of attached spreadsheet). The spreadsheet will be added to the TDP package already available. For those who requested the package they will receive it automatically by email.

Q8. Can CCG provide the hydraulic requirement details for the Hawboldt deck equipment for line sizing, etc.?

A8. Please contact the SSI, Hawboldt, to obtain the latest information directly from them.

Q9. Would CCG be open to using Pyplok non-welding piping system?

A9. This is a production level detail that will not be dealt with in the RFP stage. All specific technical requirements detailed in the TDP provide sufficient information for the Bidders to submit their proposal.

Q10. According to the SOW, items 7.1.2 and 7.1.3, the objective of Phase 1A is for the Contractor to assess and understand the design development to date and identify if any of the design made by RAL must be re-evaluated for production needs. It is not mentioned that the intent of Phase 1A: Design Review is to verify the design made by RAL against regulations, OEM requirements and recommendations, or the targeted performance of the vessel. There is even less mention that it is a design review with the aim of transferring design responsibility to the Contractor. On the other hand, in DID T-001, it is mentioned that the design examination report must include a confirmation of the conformity of the design with respect to the targeted requirements. An identification of the nature of the design problems identified, either: not conforming to the rules of the classification society, not conforming to the regulatory requirements, contradiction between the design documents, etc. Please clarify the exact scope of the design review. Does Canada expect the Contractor to check the drawings, specifications and documents forming part of the Contract with regard to the regulations and the performances targeted? If yes, please provide the detailed list of performance (speed, stability, range, future weight margin, light weight, structure sampling, ice class, etc.) that must be verified by the Contractor at this stage.

A10. The exact scope of the design review is partly described in SOW sections 7.1.2 and 7.1.3 as well as mentioned in DID T-001. DID T-001 outlines the requirements for analysis during Phase 1A design review. The checks to be completed are those described in DID T-001. With respect to this Request for Proposal, the required documents, drawings, reports and specifications have been provided to complete the submission. Upon contract award, and as required by the contractor, the information required to

complete the Phase 1A design review will be provided. Regarding the transfer of responsibility, section 7.36 Total System Vessel Responsibility indicates that the contractor is responsible from design to delivery as presented in the RFP.

Q11. In DID T-005, it is mentioned that a 3D Model of the vessel, if developed in accordance with the Contractor's procedures, should form part of the technical baseline. It is therefore understood that a 3D Model of the vessel that is not developed following the Contractor's procedures avoids this requirement?

A11. If the 3D Product Model is not developed by the Contractor according to DID T-005, it will not be required to fulfill the requirements. CCG does not want to get a copy of the 3D Product Model. CCG only needs to access the developed 3D Product Model (if developed) through appropriate viewing software (eg ShipExplorer for ShipConstructor).

Q12. In DID T-041, it is mentioned that the construction specification must be updated throughout the duration of the Contract. Is the document titled NSFRV RFP Spec / NSFRV Design Instruction and Guidance to be interpreted as the build specification that needs to be updated?

A12. The requirement of DED T-041 does not require the updating of the documents titled NSFRV RFP Spec / NSFRV Design Instruction and Guidance. The DID requirements indicate that the builder must create the construction specifications. The provided RAL documents should be used as a starting point.

Q13. In the RAL plans, it is mentioned in the notes " refer to the Robert Allan Ltd. Drawing and Specification package in its entirety ". Please provide a copy of the RAL specification. If not available, is the document entitled NSFRV RFP Spec / NSFRV Design Instruction and Guidance to be interpreted as the RAL Specification Package?

A13. Yes, the documents entitled NSFRV RFP Spec / NSFRV Design Instruction and Guidance must be interpreted as being the " Specification Package" of RAL.

Q14. DID T-096-2 states that the light weight estimate must include a detailed breakdown in accordance with the Ship Work Breakdown Structure. Is this to update the weight estimate from RAL or does the Contractor need to make their own estimate of the light weight and position of the center of gravity of the vessel from 0, based on the Contract Design plans and specifications and update it throughout the project?

A14. The Contractor must make their own light weight estimate and keep it current throughout the project.

Q15. In DID T-201, it is mentioned that the drawings and models must demonstrate how the layout conforms to the original equipment manufacturer's specifications, contract specifications, international conventions, statutory regulations and requirements. of the classification society. How does Canada expect the requested demonstration to be presented, on a plan and/or 3D model? Please provide an example of such a demonstration.

A15. The requirement for a 3D model is already in the DID-201 as it stated. A 3D model will be added to the TDP package.

Q16. In DID T-207, it is mentioned that the report must include a test of hydrodynamic models. Is this a physical tank test or can a digital test satisfy this requirement?

A16. This is a digital test.

Q17. Please provide the test reports of the NRC NSHRH model, phases 1 and 2.

A17. NRC data will be provided upon Contract Award.

Q18. Please provide copies of the following documents 212-087 DID T-105 Hull Development Summary and 219-087 Contract Design Report Rev 1.

A18. The documents requested are not required for this RFP. These are internal CCG documents.

Q19. Please provide a copy of the 3D model 219-087 10001 MK14B Hull GEODEF R2.

A19. The information will be provided to those who request access to the technical documents.

Q20. In ID 2839 of the specification, it is mentioned that the NSFRV must comply with the ASTM F1166-07 standard, what happens if the current design made by RAL does not respect certain aspects of this standard, must it be reviewed at the expense of the Contractor?

A20. Item ID 2839 will be removed and no longer applies to the list of requirements.

Q21. In ID 3077, it is mentioned that the water intake boxes must include manholes with a bolted sheet metal cover. Isn't it forbidden by the regulations to have such manholes which could compromise the watertightness of the hull on the sea water intakes?

A21. For item ID 3077, the following changes apply: delete the words 'sea chests'.

Q22. In ID 3445 it is mentioned that if the temperatures cannot be controlled within the limits, solutions or methods of mitigation must be presented and accepted by Canada. Please advise whether this work of developing solutions or methods and their implementation will be handled by notice of change.

A22. Notices of Change only apply when they reference Section 7.24 Procedure for Design Changes or Additional Work. During the design of the vessel, the Contractor must meet all the requirements as prescribed. During the design and construction of the vessel, the Contractor must meet all the prescribed requirements. The descriptions noted in the Design Guidance column are provided for informational purposes only.

Q23. In DID I-019, it is mentioned that the As-Fitted drawing are detailed "in the attached list". Please provide this list. It is understood that the diagrams must be prepared in raised plans (As-Fitted drawing) and that the plans prepared within the framework of DID T-256, T-259, T-291, according to the requirements of DID M-017, do not have to be updated and to be part of the compliant plans. It is understood that the RAL plans must be prepared in raised plans (As-Fitted drawing) and that the plans prepared within the framework of DID T-201, T-301, T-303, T-304, T-305, T-405, as required by DID M-019, need not be updated and form part of conforming plans.

A23. According to DID I-019, paragraph 2, the As-Fitted Drawing List 'will be finalized at a later date'.

Q24. 522 – Watermist:

- Is the anticipated watermist system total flood or local application for the engine and battery rooms.
- Is the anticipated watermist system a low or high pressure system?

A 24. The watermist system has been selected as the appropriate system to meet the regulatory requirements for the vessel and has been developed to a level of detail consistent with the entire technical package. 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 regulations and complete the equipment selection, integration and the design development.

Q25. 555.2 – Fixed Gas Fire Extinguishing:

- The preferred medium is noted as Inergen. Is Novec 1230 an acceptable clean agent alternate?

A25. During the design work RAL and AKA identified Inergen as the basis for the design and this is indicated in the technical package. The specific requirements for the fixed gas fire system and medium are in the specification

Q26. 555.3 – Fixed Aerosol

- 6494 - Notes FirePro fixed aerosol protection of the switchboard space. Does the type approval document for this system allow for aerosol to be the primary extinguishing medium in an electrical space?

- 6495 – Fixed aerosol is noted for protection of the propulsion room within the specification however it is not depicted on the fire safety plan. Is the intention to provide aerosol protection in this space?

A26. The design package, including drawing 219-087 72800R4 Fixed Fire Systems Arrangement, has been appraised by LR. Drawing 219-087 36000R4 Fire Safety Plan has a specific purpose in the technical package and the appraisal of the package by LR. For specific technical design details, as noted in drawing 219-087 36000R4 Fire Safety Plan, the system design requirements are detailed in drawing 219-087 72800R4 Fixed Fire Systems Arrangement. Any errors or omissions in the technical package can be addressed in Design Review phase of Contract.

Q27. Drawing - Main Electrical Equipment Arrangement 61500 - refers to drawing 50001 3D MACHINERY ARRANGEMENT. However, the latter is not part of the package of drawings sent by the contracting authority. Is it possible to receive the drawing 50001 3D MACHINERY ARRANGEMENT?

A27. Drawing 50001 3D Machinery Arrangement will be included in the technical documents package and sent to those who have already requested the package.

Q28. In Section 9.1 of the SOW, "The scope of equipment to be provided by each of these SSIs was spelled out during their respective competitive selection processes and can be seen in Appendix 1 to Annex A." an appendix 1 attached to Appendix A should be submitted, however it is impossible for us to locate this appendix. Can you send it to us?

A28. The information is included in the list titled "Major Equipment List" of the technical documents. Bidders must also confirm with the SSIs to validate the equipment lists.

Q29. At Mandatory Technical Evaluation Criterion MT7, Canada is requesting a Project Management Plan as defined in DID M-001. Does Canada want a sample project management plan for a similar project or does the Bidder provide a project management plan related to the NSFRV project, as this is only requested 30 days from contract award elsewhere in the RFP.

A29. Bidders must provide a project management plan related to the NSFRV project.

Q30. Is a list of valves included in the different circuits available, including the type of valve, the quantity, the type of system, the dimensions, the material requested, etc.? If so, please send it to us.

A30. No, however many of the data are included in the drawings.