

SOLICITATION F1782-17C814/A – STATEMENT OF WORK SUPPLEMENT – REVISION 005

This Supplement is raised to:

- 1) Address questions raised by industry.
- 2) Present comments made by Canada; and
- 3) Revise the Statement of Work document.

This version of the Solicitation F1782-17C814/A – Statement of Work Supplement supersedes all previous versions of the Solicitation F1782-17C814/A – Statement of Work Supplement. If previously raised questions remain unanswered, please resubmit them by e-mail to the Contracting Authority.

Updates to this Supplement since the last version are in green text.

This Supplement affects the content of the Solicitation and its associated documents.

The bid must take into account:

- 1) The Solicitation documents available from the Government Electronic Tendering System at <https://BuyandSell.gc.ca/procurement-data/tenders>;
- 2) This Statement of Work Supplement; and
- 3) The documentation referenced within the Solicitation documents including this Statement of Work Supplement.

A. Questions and Answers

Item	Specification Reference	Question	Answer	Date
1	N/A	Can the bidding period be extended?	The bidding period will be extended until Aug 29 th 2017.	July 30 2017
2	11.11	Are the tanks to be prepared and painted?	No the tanks do not need to be painted. They thoroughly must be washed and inspected.	July 30 2017
3	11.11 D.2.1	What are the water sampling requirements for the potable water tank?	The water samples are to follow the FSM 7.A.12 section 3.6. These are a full sample testing for 28 different contaminants.	July 30 2017
4	S.1.9	Does the fixed fire system need to be deactivated during the work period. Will this be thru 1379?	Yes. See S.1.9.3. The Contractor must ensure that the engine room, paint locker and galley fixed fire systems have been reactivated by a qualified marine fire protection company. This must be priced in the PDS.	July 30 2017
5	11.12	Are there two sounding pipes in the flume tank?	Yes.	July 30 2017
6	11.13	Can you confirm the number of fuel vents on tank #8 and tank #7?	There are 3 fuel vents on tank #8 and 2 fuel vents on tank #7.	July 30 2017
7	11.14	Was a hatch drawing provided?	Yes, a copy of the hatch drawing was included in the technical package available on BuyandSell.gc.ca	July 30 2017

8	11.14	What is the material of the new hatch?	The new hatch is an aluminium hatch.	July 30 2017
9	12.2	Will the bow thruster motors require servicing?	Any servicing of the motors will be addressed via the 1379 process.	July 30 2017
10	13.2	Why is it mandatory to subcontract to Britmar Marine Ltd. For this work?	Britmar has extensive knowledge of the installation of Lithium Ion Batteries. As the 24 volt system is crucial for the safe operation of the vessel. Britmar is to be subcontracted as an advisor and for testing.	July 30 2017
11	13.2	Can Canada provide a parts list for this specification item?	Yes by Friday Aug 4 th .	July 30 2017
12	15.1	Is there a manual available for this pump?	No information can be found on these components.	July 30 2017
13	15.1	Will the pump motor require servicing?	Any motor repairs required will be addressed via the 1379 process.	July 30 2017
14	15.1	Does the disassembled pump need to be inspected by TCMS?	No that was included in error.	July 30 2017
15	15.2	Do the disassembled pumps need to be inspected by TCMS?	No that was included in error.	July 30 2017
16	15.3	Do the disassembled pumps need to be inspected by TCMS?	No that was included in error.	July 30 2017
17	15.4	Does Canada have a drawing of the capstan that can be provided?	No information can be found on these components.	July 30 2017
18	15.4	Does the disassembled capstan need to be inspected by Natural Resources Canada?	No that was included in error.	July 30 2017
19	15.5	Does the HPU motor need to be rewound?	Yes, the bidder must include the cost of rewinding the HPU motor with their price for this specification item.	July 30 2017
20	15.6	Can Canada please confirm the type and size of valve that requires replacement?	Canada requires a 3" stainless ball valve as shown during the viewing.	July 30 2017
21	15.8	Does all the piping to be used need to be stainless steel?	Yes all piping must be stainless steel.	July 30 2017
22	19.2 Appendix A	Is the contractor providing the lab door?	Yes.	July 31 2017
23	19.2 Appendix A	Does the lab door need to be a class B rated fire door with a window?	The lab door is required to be a weather door with a window.	July 31 2017
24	19.2 Appendix A	Does the lab door need to be weather tight?	Yes	July 31 2017
25	19.2 Appendix A	Do the lab windows need to be completely replaced or are we just to bid on replacing glass?	No, the entire windows must be replaced.	July 31 2017
26	19.2 Appendix A	Does Canada require the entire deck in the lab removed to bare steel and UTS inspected?	Yes the entire deck is to be removed and UTS inspected prior to the installation of new deck coatings.	July 31 2017
27	19.2 Appendix A	Can Canada provide more information on the required air handling units?	Canada will provide update drawing by Friday Aug 4 th showing make / model and location of the air handling units	July 31 2017
28	19.2, Appendix A	Can Canada provide more information on the lab extraction fan requirements?	Canada will provide the make and model number of the fans by Friday Aug 4 th .	July 31 2017

29	19.2 E.3.1 Appendix A	Can Canada confirm what-built drawings must be produced by the successful bidder?	Canada requires all system and arrangement drawings sent in the Appendix A drawing package to be updated. Canada also requires the Fire and Safety Plan updated.	July 31 2017
30	19.2 D.5.1, D.5.2, Appendix A	Can Canada confirm the painting requirements of the house structure, bulkheads and deckhead between frames 14 and 34?	Canada removes the requirement to paint the bulkheads and frame within the lab space as the insulation is to be retained.	July 31 2017
31	11.16, Appendix C	Will CCG provide all the required cabling?	Yes, CCG will provide all the required cabling.	July 31 2017
32	11.16, Appendix C	Does CCG want to keep the old transducer housings?	No, the bidder should include the cost to dispose of the housings.	July 31 2017
33	11.19, Appendix B	Can Canada confirm the insulation requirements for renewal?	Canada requires the insulation removed and replaced as per current spec item. In addition additional 15 square meters of insulation was noted to be in bad shape and or missing. The Contractor must bid on the replacement or installation of an additional 15m2 of insulation.	July 31 2017
34	N/A	Will the vessel be down on the south coast once in contract for confirmation of measurements? If so what dates?	Yes, the vessel will be available for limited viewings Aug. 15/16 th in Port Hardy, Aug 23 rd Nanaimo, Sept 12/3 th Nanaimo and Sept 27 th at Pat Bay. Note all dates subject to change due to operational requirements contact CA prior to arrange.	Aug 1 st 2017
35	Appendix C	How much gear will Canada remove in the Foc'sle?	Canada will remove all loose gear. Freezer to remain in place but will be emptied of contents.	Aug 1 st 2017
36	Appendix C / 11.9	Does Canada require the deck head painted in the bow thruster space if the insulation is not being replaced?	Canada does not require the deck head painted other than areas affected by the steel work outlined in Appendix C.	Aug 1 st 2017
37	11.8	When viewing the vessel, we inspected the sonar space. Leading from the sonar space was a pipe tunnel, from frame 34-41, a pipe tunnel from frame 52-56, and two cofferdams outboard, frame 51-52. Are these areas to be painted two? What areas in these spaces are to be painted? (Bilges, bulkheads and deck head?)	The areas of the pipe tunnel, 2 cofferdams are to be painted as per Interspec and are to include bilge, bulk heads and deck heads. The square meter of areas to coat in the SOW had included these areas.	Aug 1 st 2017
38	11.12	Who supplies the two 8" ball check vents for the flume tank. If the shipyard is to supply the vent heads, please provide a size, make and model of the 8" ball check vent on the top of the vent pipe.	The Contractor is to supply the two Wager's 8" ABS Approved Vents stainless steel vents or equivalent.	Aug 1 st 2017
39	11.14	Is drawing no. 214-MS of the new hatch or the existing hatch? If it is of the new hatch, may we suggest you purchase a single lever configuration hatch for ease of operation, especially off the ladder from below.	The drawing is of the new hatch. The hatch has been purchased.	Aug 1 st 2017

40	13.2	Please clarify the scope of work. Does the battery system exist per the 5 drawings provided, or are we to install components indicated on the drawings?	The battery system has been reconfigured and is shown on the new drawings. Canada has included a GSM material list. The Contractor is to install the components as per the supplied drawings.	Aug 1 st 2017
41	13.2	Who supplies the battery monitor, battery monitor computer, fuses, etc. shown on the five drawings? Can we get a list of GSM components for the battery system, and a list of components already fitted at the ship, which we are to re-use.	Canada will supply all materials except for cable, transits and a new aluminum shelf. List of GSM components has been included in the SOW update.	Aug 1 st 2017
42	15.1	Please provide the manual and parts list for the two grey water pumps.	No information can be found on these pumps	
43	15.4	Can we have a manual, parts list and assembly drawing(s) for the capstan and Swann motor.	No information can be found on these components.	
44	15.8	Please clarify the scope of work for the installation of the water maker. Specifically, where is the water maker to be located in the bow thruster space, and what interference items must be addressed.	The water maker is to be located port forward in the location of the 2 refrigeration cooling pumps. These pumps will have to be relocated aft on the port side attached to new brackets and located into a save all. The refrigeration pumps will be required to be re-plumbed and electrical modified.	Aug 1 st 2017
45	15.8	C.4 What is the material for the sea water suction for the water-maker?	The material is to be priced as schedule 40 stainless steel.	Aug 1 st 2017
46	Appendix A	Are there more drawing being made available for all the individual cabinet units to be renewed throughout the lab?	As per Finishing schedule - The cabinets other than ones contained on the individual drawings are of a specialty size and are to be purchased or built by the contractor following the supplied drawings. Canada advises that Pro Nautic of Victoria (contact Buck at 250-655-6388) is one supplier capable of this work. The cabinets shown on the Lower cabinet Arrangement are all standard size and are to be purchased from a supplier that sells medical or science grade cabinets. One supplier is Mott industries who specialize in medical / science grade cabinets contact Darcy Selinger darcy@selmar.ca for information.	Aug 1 st 2017
47	Appendix A	Who supplies the ultra- low temperature laboratory freezer?	CFM make / model in finishing schedule	Aug 1 st 2017
48	Appendix A	Who supplies the chest freezer?	CFM as per finishing schedule	Aug 1 st 2017

49	Appendix A	Drawing 1 146-03-02 Wet Lab Elevations: The lower elevation shows a hazardous goods storage cupboard. Is this cupboard made of plywood also, like the other cabinets?	This cabinet is to be purchased thru a laboratory cabinet supplier. CG recommends the contractor contact Darcy Selinger darcy@selmar.ca at Mott for information.	
50	Appendix A	Please clarify the scope of work for the HVAC system. Drawing 1 146-508-00 Proposed HVAC Arrangement Sheet 1 of 2 denote Air Handling Unit 1. Drawing 1 146-508-00 Proposed HVAC Arrangement Sheet 2 of 2 denote Air Handling Unit 2. There is no description of the air handling units. (see question 25 also) The specification mentions air conditioned air for the lab.	Canada will issue new drawing showing more detail and a different arrangement by August 10 th 2017	Aug 1 st 2017
51	Appendix A	Drawing 1 1463-508-01 sheet 1 of 2 shows two exhaust air systems in the lab which are not defined, other than duct sizes. The specification is silent on them. Are these systems already existing? If not, please provide more information on the scope of work.	Canada will issue new drawing showing more detail and a different arrangement by August 10 th 2017.	Aug 1 st 2017
52	Appendix A	Drawing 1 1463-508-01 sheet 2 of 2 shows an air handling unit. There are descriptions of A3 Air handling unit -shown, A4-Condensor Unit – not shown, with notation of cooling arrangement of air handler to be determined. (Direct expansion, air or water cooled) Contractor to provide piping and plumbing connection as will be determined. Please clarify the requirement.	Canada will issue new drawing showing more detail and a different arrangement by August 10 th 2017.	Aug 1 st 2017
53	11.1	We have recently been in contact with Canada Hydrographic Services and Natural Resources Canada to request their services for inspection. They were unclear as to what is required from them in regards to inspecting the Gondola.	This statement allows for the Canadian Hydrographic Service Or National Resources Canada to attend the Contractors work facility for an inspection. CHS or NRCAN will conduct an in house inspection with their agencies technicians for a period of not more than 2 days. The TA will inform the Contractor when agencies will attend, one or both agencies may choose to waive the inspection requirement, and if this is the case the TA will inform the contractor. The TA will organize any inspections by CHS or NRCAN at a convenient time with the contractor if required.	Aug 16 th 2017
54	Appendix A	Canada Question = Has Canada modified the drawings and expanded the scope of work regarding the HVAC system into the lab	Canada has modified the drawings to the HVAC and expanded the scope of work. The new scope of work as seen in the drawings has a new HVAC system handling air for the entire vessel save the	Aug 16 th 2017

			bridge deck. 4 new drawings have been provided to the bidders containing the requirements for the new condenser and air handling systems. Note Appendix A section D.8 has been amended to reflect these changes.	
55	19.2	In the new lab can the crown please forward the part numbers and supplier name for the 600 x 600 Led panel lights and red/wht down lights shown on drawing 1146-04-03-finishing schedule to quote on the fixtures?	<p>One supplier is Ceiling Works. They are aware of the inquiry from the designer.</p> <p><i>Ashley Heard (Mr)</i> P.O. Box 70, Duncraig East L.P.O. Western Australia, 6023 Phone: +61 (0) 8 9302 5777 Web: www.ceilingworks.com.au Email: sales@ceilingworks.com.au</p> <p><i>Jim Mc Inerney</i> Phone: +61 (0) 8 9302 5777 Mobile: +61 (0) 41 991 6143 USA Cell: +1 206 491 1078</p>	Aug 21 2017
56	13.2	<p>Spec item 13.2. battery system:</p> <ul style="list-style-type: none"> • In consultation with specified supplier (Britmar) , they have advised that drawing 24V_2P_2xBMO1_split_MV_Vector is redundant, please review and advise. • The bill of material shows 6 battery monitors, the drawings only show 4, please advise as to the use of the other two battery monitors. • The bill of material does not include all of the components required on the drawings please clarify what will be CFM and what will be GSM. • Locations of the battery monitors is not indicated on the drawings, please advise • The spec calls for a total of 11 but the drawings show 15 batteries. Please clarify how many batteries are to be installed under spec 13.2.A. 	<p>The Drawing 24V_2P_2xBMO1_split_MV_Vector is redundant and should be disregarded by the bidders.</p> <p>The two additional battery monitors are for spares. There are only 4 monitors to install.</p> <p>Canada will supply 11 batteries and components listed on the bill of materials. The contractor must supply all other material.</p> <p>The 4 battery monitors shall be installed into the aluminum cabinet on the inboard side.</p> <p>The total number of batteries is 11.</p>	Aug 21 2017
58	15.5	Can the crown provide the motor name plate information for the HPU motor?	From Drawings - The electric motor is a 40 HP Westinghouse Cema C, LRA 290 type – 11-603 470 lbs. Canada will attempt to recover more information from the plate.	Aug 21 2017
59	15.8	Can Canada supply the voltage and current requirements for the GSM reverse osmosis unit as well as the panel location in	The water makers require a 230 volt single phase 30 amp feed. There is a 230 Volt Panel one deck	Aug 21 2017

		which the power supply cabling will be fed from?	above outside the galley that may be used.	
60	Appendix A	We have received the one-line drawing drwg# 1146-3-402 – 01, sheet 3 /3 for the HVAC system-The new drawing shows a new HVAC power Panel being installed. 1. Will the new HVAC Power Panel be supplied by the crownoris the contractor to Supply & install the New power panel? 2. Who will conduct the Full HVAC study that has been noted & when can we expect to know what the changes would be?	1. The contractor is to furnish the Panel, wire, connectors and holders (CFM). 2. The last set of drawings update August 16th are the final drawings and they are the work package that the contractors should bid on.	Aug 23 2017
61		Would it be possible to extend the closing date to Thursday Aug 31 ?	Yes. Canada will amend the closing date.	Aug 23 2017
62		Will the new Steel plating for the collision bulkhead replacement to be 44W with certs? Please advise	The plate must Lloyds or ABS Grade A steel and have certification. The certifications are to be included in the bidders QA package.	Aug 23 2017
63	Appendix A	Does Canada Require 4 Outlette 1500 watt kick space heaters installed in the lab?	Yes. The Contractor is to bid on purchasing and installing 4 1500 watt Oulette kick space heaters in the lab. The heaters must be installed 2 port side and 2 starboard side in the kick space under the countertops. The Contractor must pull new wire and install independent remote thermostats for each heater.	Aug 23 2017
64	Appendix A	Drawing # 1146-4-508-00 HVAC Sht3/3 shows the ducting. The drawing is not clear on what we are to Quote on: 1. The scope of duct work is unclear – Please advise if ducting shown in" blue" is to be fabricated and installed or is it the "green" or is it BOTH? 2. Please clarify If the two Extraction fans (shown in blue) are existing or are we to supply and install new fan 3units. If the fans are to be new- What is the CFM required and How will these fans be controlled . 3. The drawing also shows upper plenums installed into the house sides. Please advise if these are existing or need to be fabricated and installed during the refit.	1. Contractor is to bid on fabricating and installing both blue and green coloured ducting runs. 2. The two extraction fans are to be Contractor furnished (CFM) the fans are listed as A1 in drawing # 1146-508-01 3. The upper plenum shown on either house works sides are the lab exhaust air dampeners. The Contractor is to note the vent outlet detail on drawing #1146-508-01	Aug 23 2017
65	Appendix A	Note to contractors – A concern was raised if the new HVAC arrangement would supply enough heat for the vessel.	The vessel is equipped with heaters in each space. 4 extra lab heaters have been required as per Question # 63. Canada is confident that there will be adequate heat aboard vessel.	Aug 23 2017
66	Solicitation	ITT. We notice there is no public opening. We ask the results of the bids – Shipyard Name, Firm Price, Evaluation Price and Charge Out rate be announced on the Closing Day so contractors can make plans.	Preliminary Notification Pending the completion of the bid evaluation process, each Bidder will be notified of its preliminary ranking within 2 working days of the solicitation closing date. The notification will be made by e-mail by the Contracting Authority.	Aug 28, 2017
67	Appendix A	Spec. 19.5 Engine Room Door. Please clarify- is the door specified to be replaced the door leading from the	19.5 The Contractor must replace the engine room door between the accommodation space	Aug 28, 2017

		accommodation alleyway to the engine room or the door leading from the Machinery Control Room to the engine room?	and engine room as shown in the photo 19.5 A.1.	
67	PDS	PDS for specification 11.11 – Fresh Water Tanks, PDS lines 92-99. The specification references do not correlate with the Specification Title and Description. Please clarify?	Canada will issue a PDS rev 3 addressing these issues.	Aug 28, 2017
69	PDS	PDS for specification 11.12 – Flume Tank, PDS lines 103-111. The specification references do not correlate with the Specification Title and Description. Please clarify?	Canada will issue a PDS rev 3 addressing these issues.	Aug 28, 2017
70	Appendix A	PDS line 104. There is no description of in the Specification or the International Paint Specification (Interspec) for applying a full coat of Intershield 300? in the Flume Tank. The specification is for Repair only. Please advise?	11.12 The Contractor is to spot repair as per 11.12.C2. There is no requirement for one overall coat as the existing system is in good repair.	Aug 28, 2017
71	Appendix A	Spec. 15.2, Medium Duty Winch Pumps And Hydraulic Tanks, Line 8 of Revision To Statement Of Work Document and C.6 of Statement of Work: Who supplies the Goulds LB1035 pump. Who supplies the electric motor? Or are we using the existing motor?	15.2 The Contractor must supply the pump and motor (CFM).	Aug 28, 2017
72	15.8	We have a comprehensive manual for the AquaMatic Compact 450-1800 watermaker. We cannot find a drawing of the assembled water maker in the manual. Please provide an assembly drawing of the AquaMatic Compact 1800-2 watermaker	The water maker comes as a package and is assembled. Canada could not find a drawing of the assembled water maker but notes the overall dimensions where sent with the original bid package. Canada is confident that the packaged water maker will fit into the forward bt hatch.	Aug 30,2017
73	15.8	Are contractors to supply and install a new sea valve for the water-maker? If so, what is the valve body material? Stainless steel	The Contractor must supply stainless valve.	Aug 30 2107
74	15.8	What external filters are required. Page 22 of the manual appears to include all the pre-filtration items normally required. It is not marked optional, so we presume they are Owner supplied. Please provide drawings of these filters and advise whether they are shipped loose, or are already installed on the watermaker. A list of components to be provided by the Crown for the watermaker would be useful. The water maker comes with a plankton pre filter which is loose and separate from the 25 and 5 micron filters which are already mounted directly onto the packaged system. The Plantkon filter is a 6” plastic cartridge with a mounting plate. The Contractor must install this plankton filter in a place convenient for maintenance.	The water maker comes with a plankton pre filter which is loose and separate from the 25 and 5 micron filters which are already mounted directly onto the packaged system. The Plantkon filter is a 6” plastic cartridge with a mounting plate. The Contractor must install this plankton filter in a place convenient for maintenance.	Aug 30 2017
75	15.8	What optional external filters are being supplied . Page 23 of	Canada has provided a drawing that notes the	

		the manual numerous Optional filters which are available with the water-maker, all which presumably must be installed and connected.	break- down of CFM and GSM.	
76	15.8	What is the paint coating requirements for the interior of the water maker sea water inlet sea chest	The internals of the sea chest are to coated in Interline 925 with existing paint system blasted off.	
77	15.8	The watermaker manual calls for a forward facing scoop on the exterior hull of the vessel to ensure positive water flow to the watermaker. Will this be by 1379 action? It is not specified.	Canada does not require a forward spacing scoop due to the speed of the Vector and location of the sea chest. Canada does require the sea chest or piping to be vented with vented.	
78	15.8	The watermaker manual calls for a forward facing scoop on the exterior hull of the vessel to ensure positive water flow to the watermaker. Should the scoop be portable to permit easy servicing of the sea chest?	The scoop is not required.	
79	19.2	New Lab Door: Is the description of the door to be a <u>class B weathertight door</u> , and the requirement for the B rated fire rating is removed?	Yes the new door is to be a weather tight Class B door and removes the requirement for this to be a class b fire door.	

B. Comments

Item	Reference	Comment	Date
1	10.8	Note the colour palette to be used has changed from previous paintwork on this space.	July 30 2017

C. Revisions to the Statement of Work document

Item	Reference	Remove	Insert	Date
1	S.1.10.2	If there is more than one CG project ongoing during the work period of this project the work space cannot be combined and must have separate work stations. They me be contained in the small building but must be separated by a 5' foot high wall at minimum.	N/A	July 30 2017
2	10.1	Section removed.	N/A	July 30 2017
3	10.2	Section removed.	N/A	July 30 2017
4	10.3	Does Canada require the Galley Shutdown to be tied into the shut down outside the 1 st mates cabin	Yes Canada requires the galley shut down to be tripped at the bridge and outside of the 1 st mates cabin	July 30 2017
5	11.11.C.1	All	N/A	July 30 2017
6	15.1 D.1.1	Inspection of disassembled pumps by TI/TA and TCM.	Inspection of disassembled pumps by TI/TA.	July 30 2017

7	15.2 D.1.1	Inspection of disassembled pumps by TI/TA and TCM.	Inspection of disassembled pumps by TI/TA.	July 30 2017
8	15.2	Replace cooling pump	Canada requires the pump and motor to be replaced with a Goulds Water Technology LB1035 pump or similar. Contractor to note it is a 1 hp 230/460 3 ph motor.	Aug 1 st 2017
9	15.3 D.1.1	Inspection of disassembled pumps by TI/TA and TCM.	Inspection of disassembled pumps by TI/TA.	July 30 2017
10	15.4 D.1.1	Inspection will be done by TI/TA, and members of Natural Resource Canada.	Inspection will be done by TI/TA only.	July 30 2017
11	19.2 D.5.1, Appendix A	Remove All	N/A	July 30 2017
12	19.2 D.5.2, Appendix A	Remove All	N/A	July 30 2017
13	11.16, Appendix C	Additional information	Canada has no requirement to keep removed transducer housing. The Contractor must dispose of them.	July 31 2017
14	New Item	N/A	Deck repair main deck alley	Aug 1st 2017
15	New Item	N/A	New Moyno Sea Water Pump	Aug 1st 2017
16	New Item	N/A	Engine Room Door	Aug 1st 2017
17	Appendix A	D.8	Amended to reflect new drawings and increased scope of work	Aug 16 th 2017

ALL OTHER INSTRUCTIONS, TERMS AND CONDITIONS REMAIN UNCHANGED.