



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions Travaux
publics et Services gouvernementaux Canada**
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 1T3
Nova Scotia
Bid Fax: (902) 496-5016

**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
Atlantic Region Acquisitions/Région de l'Atlantique
Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9
Nova Scot

Title - Sujet Drydocking CCGS Alfred Needler	
Solicitation No. - N° de l'invitation F5561-171133/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client F5561-17-1133	Date 2017-11-24
GETS Reference No. - N° de référence de SEAG PW-\$HAL-311-10240	
File No. - N° de dossier HAL-7-79152 (311)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-12-04	Time Zone Fuseau horaire Atlantic Standard Time AST
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes	
Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Dunne, Dave	Buyer Id - Id de l'acheteur hal311
Telephone No. - N° de téléphone (902) 401-4294 ()	FAX No. - N° de FAX (902) 496-5016
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

Solicitation Amendment 002 is issued to provide additional vessel transfer costs in paragraph 2.9.2(ii), distribute the bidders' conference minutes, distribute the pricing data sheet, introduce three (3) new specification items and provide responses to questions submitted to the Contracting Authority.

Vessel Transfer Costs

ITT paragraph 2.9.2 (ii) table is **DELETED** and **REPLACED** with:

Shipyard / ship repair facility	Manned vessel transfer cost
Davie Québec Inc. Levis, QC	\$25,500.00
Verreault Navigation Inc. Les Méchins, QC	\$17,622.00
Aecon Atlantic Industrial Inc. Pictou, NS	\$7,809.00
New Dock Dockyard, St John's, NL	\$18,901.00
Irving Shipbuilding Inc. Halifax, NS	\$0.00
Shelburne Ship Repair, Shelburne, NS	\$4,008.00
Canadian Maritime Engineering Ltd. North Sydney, NS	\$7,913.00
Lunenburg Industrial Foundry & Engineering, Lunenburg, NS	\$1,659.00

Questions and Answers

Q: HD-07 - Are the propeller blades going to Wartsila or is the contractor to provide this service? If so can an allowance be given for this?

A: The contractor is responsible for the work on propeller blades. HD-07 paragraph 2.1 (15), first sentence is deleted and replaced with: The contractor is responsible for the examination of the propeller blades.

Q: H-06 - What is the existing underlayment and what would Coast Guard want to replace it with? 2-3 inches thick is a lot of underlayment, is this deck insulated and does the deck have a fire rating like A-60? Is there a drawing or specification of the existing deck coverings that can be provided?

A: Existing deck coverings are 2" Dex-o-tex and must be replaced with same.

Q. E-01 – In accordance with 3.1 (1) we request the Machinery Manuals.

A. The only manuals available are in hard copy on the vessel and as such will only be provided to the successful contractor.

Pricing Data Sheet

See attached.

Solicitation No. - N° de l'invitation
F5561-171133/A
Client Ref. No. - N° de réf. du client
F5562-17-1133

Amd. No. - N° de la modif.
002
File No. - N° du dossier
HAL-7-79152

Buyer ID - Id de l'acheteur
HAL311
CCC No./N° CCC - FMS No./N° VME

MINUTES OF THE BIDDERS CONFERENCE

Solicitation F5561-171133/A Docking CCGS Alfred Needler

The Bidders Conference for CCGS Alfred Needler was convened on board the ship in St. John's, Newfoundland on 21 November 2017. The following persons attended:

Dave Dunne	Contract Authority	PWGSC
Todd Smith	Technical Authority	CCG
Brian Romaine	Chief Engineer	CCGS Needler
Peter Struthers	Marine Manager	Aecon
Mark Robathan	Contracts	Newdock
Brian MacCregon		Mackinnon & Olding

Tender Closing

The Tender will close at 2:00 P.M. on 4 December 2017. The bidders present felt that the time offered to prepare bids is adequate, subject to the distribution of solicitation amendment 002 in a timely manner.

Delivery

The work period remains:

Commencement of Work 03 January 2018;
Completion of Work 14 February 2018.

Bidders present felt that the work period is adequate for the quantity of work.

Site Visit

There are no additional site visits planned for this docking. Bidders requiring additional information are to contact the Contract Authority.

Tender Deliverables

Bidders are reminded that in order for bids to be received, the following information must be included with the tender package, and received at PWGSC prior to the Solicitation closing date:

- Fully completed and signed Page 1 of the Invitation to Tender document;
- Fully completed Annex F, Financial Bid Presentation Sheet;
- Fully completed Appendix 1 to Annex F, Pricing Data Sheet.

During the bid evaluation process all certifications and other requirements contained in parts 5 and 6 will be requested and required within the prescribed time frames.

Care and Custody

The care and custody of the vessel will be transferred to the Contractor throughout the work period. The ship will remain manned by the ship's crew.

Solicitation No. - N° de l'invitation
F5561-171133/A
Client Ref. No. - N° de réf. du client
F5562-17-1133

Amd. No. - N° de la modif.
002
File No. - N° du dossier
HAL-7-79152

Buyer ID - Id de l'acheteur
HAL311
CCC No./N° CCC - FMS No./N° VME

Concurrent Work

During the planned work period other work will be ongoing on a non-interference basis with the work of this contract:

Solicitation Document

There were no questions or queries with regards to any of the Instructions, Requirements, or Resulting Contract Clauses contained in the Invitation to Tender Document.

Pricing Data Sheet

The Pricing Data Sheet, rev 1 will be provided with Solicitation Amendment No 002 that will be published in the coming days.

Specification Items removed or added:

The following specification item is introduced into the specification document.

1. Plumbing repairs to the drain pipe in the science cabin;
2. Grey water tank installation, including CFM piping and wiring.
3. Exhaust fans

Specification Review

General Notes:

The vessel is not scheduled for program immediately following the refit, however, it will be transported to Dartmouth, NS in the days following the completion of the work.

SERVICES

No question or comments.

PRODUCTION CHART

No question or comments.

HD-01 DOCKING & UNDOCKING:

Paragraph 2.1 (2), first sentence, is amended as follows:

Vessel docking must commence ~~during the FIRST DAY of the contract period~~ within 2 days following the arrival of the vessel, subject to inclement weather that would prevent docking from occurring. The dock must be prepared to accept the vessel on the first day of the contract period.

The vessel will arrive at the Contractor's facility in light ship condition and free of fishing gear.

HD-02 BUTTS AND SEAMS

Paragraph 4.2 is amended as follows:

Contractor shall include the cost of MPI non-destructive tests on all new welds, these tests shall be as directed by the attending DNV-GL Inspector.

HD-03 UNDERWATER HULL COATING

CCG is providing a third-party NACE Inspector.

HD-04 PAINTING ABOVE WATERLINE

Paragraph 2.1 (3) is amended to include:

The evaluated bid will be assessed based on 50% of the above water hull requiring repair. Contractor must provide a unit rate for blasting and subsequent coatings as described herein, in 100 square foot increments.

HD-05 HULL ANODES

No questions or comments.

HD-06 CATHODIC PROTECTION

CGTA reminds bidders that the work outlined in paragraph 2.1 (3) must be completed prior to docking.

HD-07 PROPELLER & HUB INSPECTION

GSM O-rings and gaskets have been ordered and the estimated delivery date is late December.

In paragraph 2.1 (1), the reference to specification item HD-06 is changed to HD-08.

HD-08 TAILSHAFT AND COUPLING REMOVAL AND INSPECTION

No questions or comments.

HD-09 RUDDER STOCK SURVEY

Bidders present indicated that the work outlined in paragraph 2.1 (22) (a), (d), (g), (h), (i), (j) are insufficiently defined and as such they are unable provide pricing. Paragraphs (a) and (j) are deleted. The reference material provided in the technical data package is sufficient to define paragraphs (d), (g), (h) and (i).

HD-10 FUEL TANK INSPECTIONS

Paragraph 2.1 (6) is amended to include:

All tanks must be wiped down and dried.

Paragraph 2.1 (8) and (9) are deleted. Paragraph 2.1 (10) is amended as follows:

All loose scale, dirt and debris must be removed ashore and disposed of by Contractor.

HD-11 PORT SEA CHEST ISOLATION VALVE

The scope of work is amended as follows:

The intent of this specification item is to remove overhaul the Port Sea Bay isolation valve, ~~and install a new GSM Butterfly valve in its place.~~

Paragraph 2.1 (1) is deleted and replaced with:

Contractor must remove and overhaul the sea valve as required to ensure full seal and proper operation. Upon completion of repairs, Contractor must allow CGTA and DNV-GL to inspect sea valve prior to reinstallation.

Paragraph 2.1 (3) is deleted.

HD-12 PROTECTION AND ENCLOSURES

The Contracting Authority emphasized to bidders that the requirement for shelter is mandatory and exceptions to this specification item will not be considered.

CGTA clarified that area that requires sheltering is all areas below the bow and the trawl deck.

Paragraph 2.2 is amended as follows:

Shelter is required in all outdoor areas of the ship requiring coating.

H-01 BERTHING

No questions or comments.

H-02 PORTABLE FIRE EXTINGUISHERS

No questions or comments.

H-03 FIRE DETECTION AND SUPPRESSION SYSTEMS

No questions or comments.

H-04 SWEEPLINE CLUTCH

Paragraph 1, second sentence is amended as follows:

~~Completion~~ Testing of this specification must be completed in water, in conjunction with Sea Trials.

H-05 TRAWL DECK PAINTING

No questions or comments.

H-06 SCIENCE CABIN DECK COVERINGS

Paragraph 2.1 (1) is amended as follows:

Contractor must remove & dispose of the carpet, baseboard moulding, and ~~any~~ approximately 2m² underlay per cabin (8m² total) exposing the open deck currently fitted in the four science cabins on the shelter deck. Contractor must also provide unit price per square meter for adjustment.

E-01 GEARBOX OIL COOLER INSPECTION

Reference 2.1 (4), the estimated volume of oil for disposal is 20 liters.

Solicitation No. - N° de l'invitation
F5561-171133/A
Client Ref. No. - N° de réf. du client
F5562-17-1133

Amd. No. - N° de la modif.
002
File No. - N° du dossier
HAL-7-79152

Buyer ID - Id de l'acheteur
HAL311
CCC No./N° CCC - FMS No./N° VME

CCG will be responsible for refilling oil.

L-01 ELECTRICAL INSULATION TESTING

No questions or comments.

L-02 GALLEY EQUIPMENT CLEANING

Paragraph 1 is amended as follows:

The intent of this specification is to internally and externally degrease and thoroughly clean the ship's Deep Fryer and ~~outboard~~ both Ranges.

~~In order to minimise interruption to galley services, this specification shall be completed alongside E-07 - Galley Range Installation.~~

OPEN DISCUSSION ITEMS

All references to TCMSS and TCMS within the specification are deleted and replaced with DNV-GL.

CGTA confirmed that the Contractor is responsible for arranging DNV-GL inspections. Inspections will be billed directly to CCG.

There being no other issues the meeting was adjourned at 12:15 local.

APPENDIX 1 TO ANNEX F

PRICING DATA SHEET, REV 1

2- Services (43 Days) to be adjusted in accordance with Annex F of Solicitation Document, Daily Services Fees)	1	\$ _____
paragraph 6 Electric Power Unit Cost / kWh for adjustment	\$ _____	
paragraph 7 Cranage unit cost / hour	\$ _____	
paragraph 7 Cranage unit cost / lift	\$ _____	
paragraph 8 Potable & Sanitary water unit cost / cubic meter for adjustment	\$ _____	
paragraph 9 Waste management cost per removal	\$ _____	
paragraph 11 Deck protection unit cost / square metre	\$ _____	
paragraph 13 Fluids removal unit cost / 2500 litres	\$ _____	
paragraph 15 Overboard discharges unit cost disposal / cubic meter	\$ _____	
3 – Production Chart	2	\$ _____
HD-01 – Docking & Undocking	3	\$ _____
2.1 (7) Cost of tugs/pilots if/as required	4	\$ _____
HD-02 – Butts and Seams	5	\$ _____
2.1 (5)(a) Cost of repairing 200 linear feet & 3 mob/demobs	6	\$ _____
2.1 (5) Unit cost gouging price / linear foot	\$ _____	
2.1 (5) Unit cost welding price / linear foot	\$ _____	
2.1 (5) Unit cost mob/demob	\$ _____	
HD-03 – Underwater Hull Coating	7	\$ _____
2.1 (17) blasting and coating / 100 square feet	\$ _____	
2.1 (18) sweep blasting and coating / 100 square feet	\$ _____	
HD-04 – Painting Above Waterline	8	\$ _____
2.1 (3) blasting and coating / 100 square feet	\$ _____	
HD-05 – Hull Anodes	9	\$ _____
2.1 (2) Unit cost replacement anode	\$ _____	
HD-06 – Cathodic Protection	10	\$ _____
2.1 (2) FSR allowance	11	\$5,000.00
HD-07 – Propeller and Hub Inspection	12	\$ _____
2.1 (3) FSR allowance	13	\$30,000.00
HD-08 – Tailshaft and Coupling Removal and Inspection	14	\$ _____
HD-09 – Rudder Stock	15	\$ _____
2.1.(22)(b) Cost to sandblast rudder stock	\$ _____	
2.1.(22)(c) Cost per side to re-face carrier bearing wear plate	\$ _____	
2.1.(22)(d) Cost to renew carrier bearing wear plate	\$ _____	
2.1.(22)(e) Cost to re-face carrier bearing surface	\$ _____	
2.1.(22)(f) Cost to re-face tiller head bearing surface	\$ _____	
2.1.(22)(g) Cost to renew carrier bearing bushing	\$ _____	
2.1.(22)(h) Cost to renew lower stock bushing	\$ _____	
2.1.(22)(i) Cost to renew pintle bushing	\$ _____	
HD-10 – Fuel Tank Inspections	16	\$ _____
2.1 (2)(a) Cost to replace 10 studs	17	\$ _____

2.1.(2)(a) Unit cost replacement stud	\$ _____	
2.1.(9)(a) Cost of tank preparations / 10 square meters	\$ _____	
2.1.(9)(a) Cost to clean 25% of each tank		18 \$ _____
2.1 (12) Cost of hydrostatic testing all tank	\$ _____	
HD-11 – Port Sea Chest Isolation Valve		19 \$ _____
HD-12 – Protection and Enclosures		20 \$ _____
H-01 - Berthing		21 \$ _____
2.1 (3) Costs for tugs and pilots if/as required		22 \$ _____
H-02 - Portable Fire Extinguishers		23 \$ _____
H-03 - Fire Detection and Suppression Systems		24 \$ _____
H-04 - Sweepline Clutch		25 \$ _____
H-05 - Trawl Deck Painting		26 \$ _____
H-06 - Science Cabin Deck Coverings		27 \$ _____
2.1 (1) Unit price / square meter underlay removal/disposal	\$ _____	
H-07 - Cabin Drain Line		28 \$ _____
H-08 - Starboard Grey Water Tank		29 \$ _____
E-01 - Gearbox Oil Cooler Inspection		30 \$ _____
L-01 - Electrical Insulation Test		31 \$ _____
L-02 - Galley Equipment Cleaning		32 \$ _____
L-03 - Fan & Motor Overhauls		33 \$ _____
TOTAL TAXES NOT INCLUDED (items 1 to 33) This is the price for Known Work in Annex F		\$ _____

CCGS Alfred Needler
2017 FY Dry-Dock
H-07 Cabin Drain Line

1: SCOPE:

The intent of this specification is to replace the floor and shower drain piping along with the hot water supply line from Scientist cabin located ahead of the Senior Engineer's cabin.

2: TECHNICAL DESCRIPTION:

2.1 General

1. Contractor must lock out and protect #1 Ship Service Generator from water damage.
2. Contractor must remove insulation as required to gain access to the damaged piping.
3. Contractor must crop out and replace approximately 10 feet of 2" Sch. 40 steel drain piping. This 2" piping includes the floor drain scupper piping & the shower drain piping from the scupper to the first flange downstream.
4. Contractor must also replace a 5' section of ½" copper piping supplying hot water to the shower. The ½" piping shall be replaced from the deckhead above #1 SSG down to & including the first "T" piece in the piping.
5. Upon completion of reinstallation and testing, all insulation must be restored as original.

2.2 Location

1. The drain line is connected to the scientist cabin washroom, main deck frames 37-40 port.

2.3 Interferences

1. The ship's #2 Auxiliary Generator is located beneath the damaged piping requiring renewal. The generator must be locked out of service, and adequately covered to prevent water from coming into contact with the engine or generator.
2. Contractor is responsible for the identification of any interference items, their temporary removal, storage, and refitting to the vessel.

3: REFERENCES:

3.1 Guidance Drawings/Nameplate Data

1. N/A

3.2 Standards and Regulations

1. N/A

3.3 Owner Furnished Equipment

1. N/A

H-07 Cabin Drain Line

4: PROOF OF PERFORMANCE:

4.1 Inspection

1. CGTA shall inspect new flooring and Baseboard mouldings for cleanliness and install quality once installation is completed.

4.2 Testing

1. The drains must be tested by pouring a minimum 4L down each drain, as well as running the shower for 15 minutes to confirm no leaks in the system.

4.3 Certification

1. N/A

5: DELIVERABLES:

5.1 Reports, Drawings, and Manuals

1. N/A

5.2 Spares

1. N/A

5.3 Training

1. N/A

H-08 – Starboard Grey Water Tank

1: SCOPE:

The intent of this specification is to install the GSM Grey Water Holding Tank with required plumbing and electrical to match the configuration of the Port Grey Water System.

2: TECHNICAL DESCRIPTION:

2.1 General

1. Contractor must install the new GSM Grey Water tank to mirror the currently installed Port tank. The bottom of the tank must be mounted at the same height as the lube oil storage tank bottom.
2. Contractor must connect the GSM pump and associated High / Low Level switches as required.
3. Contractor must supply & install a 3/8" plexi-glass inspection cover & rubber gasket on the grey water tank along with wing nuts to secure it, similar to the port grey water tank.
4. Contractor must modify the starboard grey water piping arrangement as per the drawing in section 3.1 below.
5. All pipes, flanges, valves, wire, pump starter box/controller, and consumables required to complete this installation shall be contractor supplied. Supplied piping shall be schedule 40 black iron.
 - a) Supplied strainer must have a basket with a combination of 1/6" & 1/32" diameter sizes holes.
 - b) The electrical demands for this system shall be 230V 3Ph supplied by an existing power source in the workshop area. The power is being supplied by MPP1-8. Wires are already run from the panel to the workshop area. Wires must be connected to the breaker in the panel as they were once used but are now disconnected in the panel & in the workshop. Contractor must install a junction box in the workshop & approximately 20 feet of wire in order to reach tank with power supply.
6. Contractor must run new piping from current grey water drains to the grey water tank while allowing access to the lube oil storage tank.
7. Contractor must complete as much of this work as possible without disturbing the current grey water system as there shall be crew staying onboard the vessel.
8. Once the drain line leading to the sewage tank is cut, the currently installed swing check v/v must be removed and a blank flange installed in its place.
9. All new and disturbed steel must be adequately cleaned and coated with two coats of marine primer paint with the final coat being white.

H-08 – Starboard Grey Water Tank

2.2 Location

1. The tank will be installed in the Engineer's Workshop, stbd side ahead of the lube oil storage tank.

2.3 Interferences

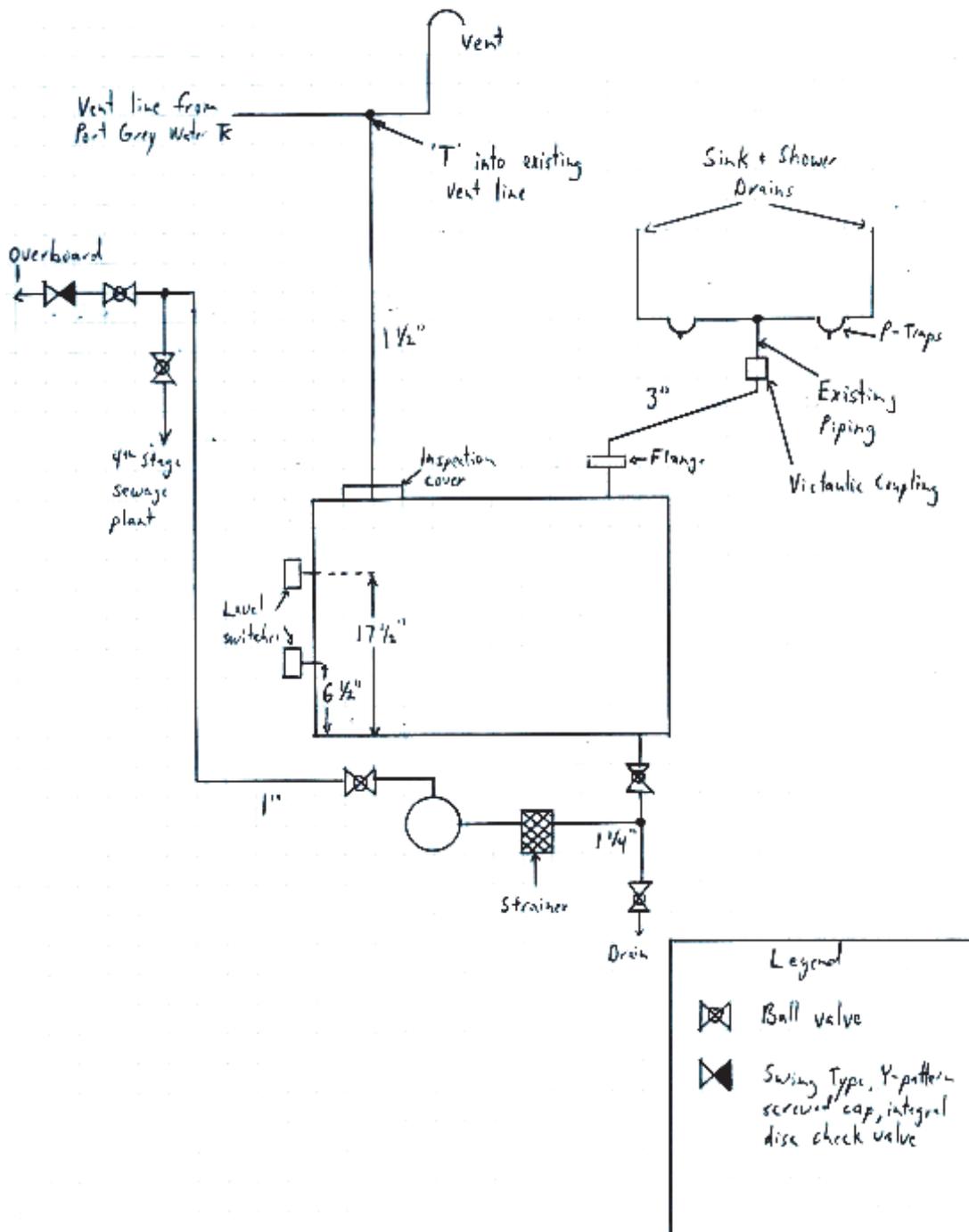
1. Contractor must plan their work to minimise shut down time of the ship's sanitary water system, and provide ample notice to ship's staff of any interruptions to services. If a shutdown lasting more than two hours is required, Contractor must supply two heated portable toilets for the duration of the service interruption.
2. Contractor is responsible for the identification of any interference items, their temporary removal, storage, and refitting to the vessel.

3: REFERENCES:

3.1 Guidance Drawings/Nameplate Data

1. **Pump data:** Goulds NPE 316L SS Closed Coupled Pump, Size: 1 x 1.25 -6 SS Wet End. 6.125" imp, c/w 2 hp, 60hz, 2 pole 3500 rpm 3 phase TEFC pump
2. **Level Switch data:** Vibrating Tuning Fork V-Tork mod.: VTKR, Power Supply: 20-60 VDC / 20-264 VAC, Output: Relay (SPDT), Process Connection: 3/4" NPT - 316 SS, Insertion Length: L= 3.1/8" (80 mm) - 316 SS, Enclosure: Nylon, N1, Order Code: VTKR-4-N-S-L80-N1-6

H-08 – Starboard Grey Water Tank



Piping schematic for new grey water tank.

CCGS Alfred Needler
2017 FY Dry-Dock

H-08 – Starboard Grey Water Tank



Lube oil storage tank & location of where to splice into existing grey water drain.

CCGS Alfred Needler
2017 FY Dry-Dock

H-08 – Starboard Grey Water Tank



Port grey water strainer (left) & Tank (right)

H-08 – Starboard Grey Water Tank

3.2 Standards and Regulations

1. CCG Welding Procedures
2. CCG ISM Lock-out & Tag-out.
3. TCMS TP127 Electrical Standards

3.3 Owner Furnished Equipment

1. The new grey water tank, along with sanitary pump and level switches shall be GSM. All other materials required to complete this specification shall be Contractor supply.

4: PROOF OF PERFORMANCE:

4.1 Inspection

1. CGTA and DNV-GL shall be given opportunities to inspect the installation as required.

4.2 Testing

1. After completion of installation, the showers located on the starboard side of the vessel must be run to test drainage to the new tank, and proper pump down operation. The testing must be done to the satisfaction of the CGTA.

4.3 Certification

1. N/A

5: DELIVERABLES:

5.1 Reports, Drawings, and Manuals

1. N/A

5.2 Spares

1. N/A

5.3 Training

1. N/A

L-03 – Fan & Motor Overhauls

1: SCOPE:

The intent of this specification item is to overhaul and rebuild three duct fans; two for Engineroom and one Galley Exhaust fan. This specification must be completed in conjunction with trawl deck painting.

2: TECHNICAL DESCRIPTION:

2.1 General

1. Contractor must lock out Engineroom Exhaust fan, Engineroom Supply Fan aft and Galley Exhaust Fan.
2. Contractor must close & isolate ducting to prevent weather from entering the vessel.
3. Contractor must remove fans & motors for overhaul in a shore facility.
4. Contractor shall remove fans from motor shafts and must be cleaned & inspected for wear.
5. Contractor must install new sealed bearings & lip seals if fitted, in all motors.
6. Contractor must power tool clean the motor duct housings and louvers, removing old gaskets and loose paint.
7. Contractor must coat with Amerlock 2 (White) coating system, including all primer coats as required by manufacturer recommendations.
8. Louvers must have gaskets renewed and glued into place. New grease, rated for exterior, shall be installed on bushes and pins for Louvers.
9. Securing arrangements shall be cleaned and inspection for excessive wear or corrosion.
10. Ducting (interior and exterior) and louvers must be given 1 coat of primer and 2 coats of paint with a white topcoat.
11. Contractor must re-assemble fans & motors and mount them to their respective ducting.
12. Contractor must re-assemble louvers and mount them to their respective ducting. Louvers must be verified for 100% contact area and ease of operation to close fully. Chalk or garden hose test shall be carried out to ensure weather tight integrity.
13. Contractor must prove operation of fans and motors upon final assembly of electrical connections.

2.2 Location

1. Engineroom Supply fan and Galley Exhaust fans are located in fan casings on the stbd side trawl deck.

2.3 Interferences

1. Contractor is responsible for the identification of any interference items, their temporary removal, storage, and refitting to the vessel

L-03 – Fan & Motor Overhauls

3: REFERENCES:

3.1 Guidance Drawings/Nameplate Data

1. Galley:
 - a. 440VAC, 3 Φ
 - b. Fused at 3A
2. Engine Room Supply:
 - a. 440VAC, 3 Φ
 - b. Fused at 7A
3. Engine Room Exhaust:
 - a. 440VAC, 3 Φ
 - b. Fused at 15A

3.2 Standards and Regulations

1. Contractor must follow Canadian Coast Guard Fleet Safety Manual lock out/tag out procedures
2. TCMS TP127 Shipboard Electrical Standards

3.3 Owner Furnished Equipment

N/A

4: PROOF OF PERFORMANCE:

4.1 Inspection

1. After power tooling and before final assembly, CGTA must be given the opportunity to view the fan casings internals.

4.2 Testing

1. Contractor must prove the fans and motors have quiet operations and louvers open/closed easily.
2. Contractor must prove watertight integrity of the fan casing for DNV-GL approval.

4.3 Certification

N/A

L-03 – Fan & Motor Overhauls

5: DELIVERABLES:

5.1 Reports, Drawings, and Manuals

1. Contractor must provide a list of all parts used for the rebuilding of pump and motor.

5.2 Spares

N/A

5.3 Training

N/A