



**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

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

<b>Title - Sujet</b> EVAPORATORS	
<b>Solicitation No. - N° de l'invitation</b> F7049-160004/A	<b>Date</b> 2016-05-03
<b>Client Reference No. - N° de référence du client</b> F7049-160004	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$ML-035-25832	
<b>File No. - N° de dossier</b> 035ml.F7049-160004	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2016-06-14</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Tinkess, Dianne / Laprise, JF	<b>Buyer Id - Id de l'acheteur</b> 035ml
<b>Telephone No. - N° de téléphone</b> (819) 420-2901 ( )	<b>FAX No. - N° de FAX</b> (819) 956-0897
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> See Herein	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Marine Machinery and Services / Machineries et services  
maritimes  
11 Laurier St. / 11, rue Laurier  
6C2, Place du Portage  
Gatineau  
Québec  
K1A 0S5

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

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

There is no security requirement applicable to this Contract.

### **1.2 Requirement**

The Canadian Coast Guard (CCG) has a requirement to purchase four (4) Evaporators, two (2) replacement 10m3 evaporators on board the CCGS Edward Cornwallis and CCGS Sir William Alexander (one (1) per vessel) in accordance with the Statement of Work (SOW) Annex "A" and two (2) new 6m3 evaporators on board the CCGS Ann Harvey and CCGS George Pearkes (one (1) per vessel) in accordance with the Statement of Work (SOW) Annex "B".

The requirement also includes two (2) options to purchase one (1) identical evaporator per option for the 10m3 evaporators and two (2) options to purchase one (1) identical evaporator per option for the 6m3 evaporators. The options may be exercised within twelve (12) months of contract award date.

### **1.3 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

### **1.4 Trade Agreements**

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

## **PART 2 - BIDDER INSTRUCTIONS**

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

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2016-04-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

#### **2.1.1 SACC Manual Clauses**

B1000T (2014-06-26) Condition of Material - Bid

## 2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

## 2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **seven (7)** calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

## 2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in **Ontario**.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

## PART 3 - BID PREPARATION INSTRUCTIONS

### 3.1 Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound volumes as follows:

Section I: Technical Bid (2 hard copies)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

### **Section I: Technical Bid**

In their technical bid, bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Bids shall follow all instructions, general terms, conditions and clauses identified herein by title, number and date. All references to descriptive material, technical manuals and brochures included as part of this Bid should be referenced accordingly.

The Technical Bid must include:

- (a) Mandatory Technical Criteria - Annex "D".

### **Section II: Financial Bid**

Bidders must submit their financial bid in accordance with the Annex "E" Financial Bid Presentation Sheet. The total amount of Applicable Taxes must be shown separately.

As per Part 1, Section 1.2, Canada may exercise two (2) options to purchase one (1) identical evaporator per option for the 10m3 evaporators and two (2) options to purchase one (1) identical evaporator per option for the 6m3 evaporators. The options may be exercised within twelve (12) months of contract award date.

As per Financial Bid Presentation Sheet of Annex "E", Bidders shall provide prices for the original order and for optional units. **All prices provided by the Bidders for the optional units shall be good for twelve (12) months following contract award.**

Canada may decide to purchase the additional quantity of four (4) evaporators or a portion of that quantity at any given time within the twelve (12) months following contract award.

All quantities ordered by Canada shall be invoiced in accordance with the prices in the Basis of Payment of Annex "C".

### **3.1.1 Exchange Rate Fluctuation**

The requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non-responsive.

### **Section III: Certifications**

Bidders must submit the certifications and additional information required under Part 5.

## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

#### **4.1.1 Mandatory Technical Criteria**

The Mandatory Deliverables required with any bid are described in the Annex "D" – Mandatory Technical Criteria.

#### **4.1.2 Financial Evaluation Criteria**

##### **Evaluation of Price - Bid**

The price of the bid as described in Annex "E" – Financial Bid Presentation Sheet will be evaluated in Canadian dollars, Applicable Taxes excluded, DDP destination incoterms 2000, Canadian customs duties and excise taxes included.

### **4.2 Basis of Selection – Multiple Items**

A bid must comply with all the requirements of the bid solicitation and meet all mandatory technical evaluation criteria of Annex "D", Mandatory Technical Criteria and all Financial Evaluation Criteria to be declared responsive. The responsive bid with the lowest evaluated price on an aggregate basis will be recommended for award of a contract.

## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

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

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

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## **5.1 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

### **5.1.1 Integrity Provisions - Declaration of Convicted Offences**

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politiquepolicy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

## **5.2 Certifications Precedent to Contract Award and Additional Information**

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

### **5.2.1 Integrity Provisions – Required Documentation**

In accordance with the *Ineligibility and Suspension Policy* the Bidder must provide the required documentation, as applicable.

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politiquepolicy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

### **5.2.2 Federal Contractors Program for Employment Equity - Bid Certification**

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website ([http://www.esdc.gc.ca/en/jobs/workplace/human\\_rights/employment\\_equity/federal\\_contractor\\_p  
rogram.page?&\\_ga=1.229006812.1158694905.1413548969](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)).

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

## **PART 6 - RESULTING CONTRACT CLAUSES**

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

### **6.1 Security Requirements**

**6.1.1** There is no security requirement applicable to the Contract.

### **6.2 Requirement**

The Contractor must provide four (4) Evaporators, two (2) replacement 10m3 evaporators on board the CCGS Edward Cornwallis and CCGS Sir William Alexander (one (1) per vessel) in accordance with the Statement of Work (SOW) Annex "A" and two (2) new 6m3 evaporators on board the CCGS Ann Harvey and CCGS George Pearkes (one (1) per vessel) in accordance with the Statement of Work (SOW) Annex "B".

The requirement also includes two (2) options to purchase one (1) identical evaporator per option for the 10m3 evaporators and two (2) options to purchase one (1) identical evaporator per option for the 6m3 evaporators. The options may be exercised within twelve (12) months of contract award date.

### **6.3 Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the *[Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual)* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### **6.3.1 General Conditions**

2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

### **6.4 Term of Contract**

#### **6.4.1 Delivery Date**

All the deliverables must be received on or before 15 November 2016.

#### **6.4.2 Optional Goods**

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex "A" and Annex "B" of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option to purchase any or all of the two (2) options to purchase one (1) identical evaporator per option for the 10m3 evaporators and the two (2) options to purchase one (1) identical evaporator per option for the 6m3 evaporators. The options may be exercised within twelve (12) months of contract award date.

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All prices provided by the Contractor for the optional units are valid for twelve (12) months following contract award.

## **6.5 Authorities**

### **6.5.1 Contracting Authority - 1**

The Contracting Authority for the Contract is:

Jean-François Laprise  
Supply Specialsit  
Public Works and Government Services Canada  
Acquisitions Branch  
Marine Systems Directorate  
Place du Portage, Phase III -6C2  
11 Laurier St.  
Gatineau, QC  
K1A 0S5  
Telephone: 819-420-2902  
Facsimile: 819-956-0897  
E-mail address: Jean-francois.laprise@tpsgc-pwgsc.gc.ca

### **Contracting Authority - 2**

The Contracting Authority for the Contract is:

Dianne Tinkess  
Supply Officer  
Public Works and Government Services Canada  
Acquisitions Branch  
Marine Systems Directorate  
Place du Portage, Phase III -6C2  
11 Laurier St.  
Gatineau, QC  
K1A 0S5  
Telephone: 819-420-2901  
Facsimile: 819-956-0897  
E-mail address: Dianne.Tinkess@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

### **6.5.2 Project Authority**

The Project Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

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E-mail address: \_\_\_\_\_

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority, however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

### 6.5.3 Contractor's Representative

Name: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

## 6.6 Payment

### 6.6.1 Basis of Payment - Firm Unit Prices

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices in accordance with the Basis of Payment Annex "C". Customs duties are included, and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

#### Optional Goods

Canada may decide to purchase the additional quantity or a portion of that quantity of the two (2) options to purchase one (1) identical evaporator per option for the 10m<sup>3</sup> evaporators and two (2) options to purchase one (1) identical evaporator per option for the 6m<sup>3</sup> evaporators. The options may be exercised within twelve (12) months of contract award date.

All quantities ordered by Canada shall be invoiced in accordance with the prices in Annex "C" – Basis of Payment.

### 6.6.2 Limitation of Price

SACC Manual clause [C6000C](#) (2011-05-16) Limitation of Price

### 6.6.3 Method of Payment

SACC Manual clause [H1001C](#) (2008-05-12) Multiple Payments

### 6.6.4 SACC Manual Clauses

C2000C (2007-11-30) Taxes - Foreign-based Contractor

## 6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be submitted on the supplier's own invoice form and must be prepared to show:
  - (a) The date
  - (b) Name and address of the consignee
  - (c) Item number, quantity, part number, reference number and description
  - (d) Contract number.
3. Invoices must be distributed as follows:
  - (a) The original and one (1) copy of all invoices must be forwarded to the appropriate consignee.
  - (b) One (1) copy to:

[DFOinvoicing-MPOfacturation@DFO-MPO.GC.CA](mailto:DFOinvoicing-MPOfacturation@DFO-MPO.GC.CA)

Attn: Kim Green
  - (c) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
4. Payment will only be made on receipt of satisfactory invoices duly supported by specific release documents and/or other documents called for under this document. Invoices are not be submitted prior to shipment of materiel.
5. If payment is to be made to an address other than the address on the cover page of the contract, it is to be clearly identified within the body of the contract as the "Remit to" address. This address should include the following:

Company name  
Full Address  
City  
Province/State  
Postal/Zip Code

## 6.8 Certifications and Additional Information

### 6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

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## 6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in \_\_\_\_\_. (The contracting authority will insert the name of the province or territory as specified by the Bidder in its bid, if applicable)

## 6.10 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2010A (2016-04-04) General Conditions - Goods (Medium Complexity);
- (c) Annex A Statement of Work 10m3;
- (d) Annex B Statement of Work 6m3;
- (e) Annex C Basis of Payment; and
- (f) the Contractor's bid dated \_\_\_\_\_ (The contracting authority will insert the date of submission).

## 6.11 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:

- a. Free on Board (Destination) common carrier, CCGS Sir William Alexander and CCGS Edward Cornwallis in Dartmouth NS and CCGS Ann Harvey and CCGS George Pearkes in St. Johns NL for shipments from the United States government; or
- b. Delivered Duty Paid (DDP), CCGS Sir William Alexander and CCGS Edward Cornwallis in Dartmouth NS and CCGS Ann Harvey and CCGS George Pearkes in St. Johns NL Incoterms 2000 for shipments from a commercial contractor.

### Delivery Addresses:

#### 2 - 10m3 Evaporators

CCGS Sir William Alexander  
CCGS Edward Cornwallis  
Coast Guard O5C Warehouse, Door #1,  
13 Akerley Blvd  
Dartmouth, NS  
B3B 1J6

#### 2 - 6m3 Evaporators

CCGS Ann Harvey  
CCGS George Pearkes  
Coast Guard Tech Stores  
Southside Base  
280 Southside Rd  
St. John's, NL  
A1C 5X1

Solicitation No. - N° de l'invitation  
F7049-160004/A  
Client Ref. No. - N° de réf. du client  
F7049-160004

Amd. No. - N° de la modif.  
File No. - N° du dossier  
035ml. F7049-160004

Buyer ID - Id de l'acheteur  
035ml  
CCC No./N° CCC - FMS No./N° VME

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**ANNEX "A"**  
**STATEMENT OF WORK - 10M3**  
**FOR THE 10M3 REPLACEMENT EVAPORATOR ONBOARD THE CLASS 1100 CANADIAN COAST**  
**GUARD SHIP (CCGS)**  
**SEE ATTACHED**

Solicitation No. - N° de l'invitation  
F7049-160004/A  
Client Ref. No. - N° de réf. du client  
F7049-160004

Amd. No. - N° de la modif.  
File No. - N° du dossier  
035ml. F7049-160004

Buyer ID - Id de l'acheteur  
035ml  
CCC No./N° CCC - FMS No./N° VME

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**ANNEX "B"**  
**STATEMENT OF WORK - 6M3**  
**FOR THE NEW 6M3 EVAPORATOR ONBOARD THE CLASS 1100 CANADIAN COAST GUARD SHIP**  
**(CCGS)**  
**SEE ATTACHED**

**ANNEX "C"**

**BASIS OF PAYMENT**

Annex "C" will form the Basis of Payment for the resulting Contract and must not be filled in at the bid submission stage.

The Contractor will be paid firm prices as follows, for work performed in accordance with the Contract. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax (GST/HST) is extra, if applicable.

Item No.	Description	Unit of Issue	Qty	Unit Price	Extended Price
1	10m3 Evaporator as per Annex "A"	Ea	2	\$	\$
2	Set of Special Purpose Tools (SPT) as per Annex "A"	Set	2	\$	\$
3	Set of Spare parts as per Annex "A"	Set	2	\$	\$
4	Set of Design Approval as per Annex "A"	Set	1	\$	\$
5	Set of Proof of Performance as per Annex "A"	Set	1	\$	\$
6	Set of Certification as per Annex "A"	Set	1	\$	\$
7	Set of Documentation set as per Annex "A"	Set	2	\$	\$
8	6m3 Evaporator as per Annex "B"	Ea	2	\$	\$
9	Set of Special Purpose Tools (SPT) as per Annex "B"	Set	2	\$	\$
10	Set of Spare parts as per Annex "B"	Set	2	\$	\$
11	Set of Design Approval as per Annex "B"	Set	1	\$	\$
12	Set of Proof of Performance as per Annex "B"	Set	1	\$	\$
13	Set of Certification as per Annex "B"	Set	1	\$	\$
14	Set of Documentation set as per Annex "B"	Set	2	\$	\$
	<b>Total</b>				<b>\$</b>

Item No.	OPTIONAL WORK	Unit of Issue	Qty	Unit Price	Extended Price
1	10m3 Evaporator including all spares, tools, manuals and certificates as per Annex "A", option year 1	Ea		\$	\$
2	6m3 Evaporator including all spares, tools, manuals and certificates as per Annex "B", option year 1	Ea		\$	\$

**ANNEX "D"**

**MANDATORY TECHNICAL CRITERIA**

<b>Mandatory Technical Criteria</b>				
<b>Item #</b>	<b>Criteria</b>	<b>Compliant</b>		<b>Reference to applicable page and paragraph of Proposal</b>
		<b>Yes</b>	<b>No</b>	
1	The Bidder must provide objective evidence that he has designed, manufactured and successfully delivered at least one (1) Class approved Evaporator in similar complexity to the Evaporator for vessel applications within the last year.			
2	The Bidder must demonstrate that the proposed Evaporator meets the Technical Requirements in the SOW 10m3 in Annex A and in the SOW 6m3 in Annex B.			
3	Bidder's must demonstrate that the proposed Evaporator and all of its installed piping required for the operation of the Evaporator fit into the footprint identified in the SOW 10m3 in Annex A and in the SOW 6m3 in Annex B.			

**ANNEX "E"**

**FINANCIAL BID PRESENTATION SHEET**

1. Bidder shall complete the following tables and indicate their firm prices for the Known and Optional Work.
2. All Prices must include the cost of delivery.

Item No.	Description	Unit of Issue	Qty	Unit Price	Extended Price
<b>KNOWN WORK</b>					
1	10m3 Evaporator as per Annex "A"	Ea	2	\$	\$
2	Set of Special Purpose Tools (SPT) as per Annex "A"	Set	2	\$	\$
3	Set of Spare parts as per Annex "A"	Set	2	\$	\$
4	Set of Design Approval as per Annex "A"	Set	1	\$	\$
5	Set of Proof of Performance as per Annex "A"	Set	1	\$	\$
6	Set of Certification as per Annex "A"	Set	1	\$	\$
7	Set of Documentation set as per Annex "A"	Set	2	\$	\$
8	6m3 Evaporator as per Annex "B"	Ea	2	\$	\$
9	Set of Special Purpose Tools (SPT) as per Annex "B"	Set	2	\$	\$
10	Set of Spare parts as per Annex "B"	Set	2	\$	\$
11	Set of Design Approval as per Annex "B"	Set	1	\$	\$
12	Set of Proof of Performance as per Annex "B"	Set	1	\$	\$
13	Set of Certification as per Annex "B"	Set	1	\$	\$
14	Set of Documentation set as per Annex "B"	Set	2	\$	\$
<b>OPTIONAL WORK</b>					
15	10m3 Evaporator including all spares, tools, manuals and certificates as per Annex "A", option year 1	Ea	2	\$	\$
16	6m3 Evaporator including all spares, tools, manuals and certificates as per Annex "B", option year 1	Ea	2	\$	\$
<b>Total Evaluated Price</b>					<b>\$</b>

Solicitation No. - N° de l'invitation  
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035ml. F7049-160004

Buyer ID - Id de l'acheteur  
035ml  
CCC No./N° CCC - FMS No./N° VME

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**Note 1: For Evaluation purposes the estimated quantity of an option is two (2) evaporators including all spares, tools, manuals and certificates.**

Note 2: All provided prices / rates shall be before GST or HST as applicable.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

**ANNEX A**

**STATEMENT OF WORK (SOW)**

**FOR THE**

**10m3 EVAPORATOR REPLACEMENT**

**ONBOARD THE**

**CLASS 1100**

**CANADIAN COAST GUARD SHIP (CCGS)**

Prepared by CCG Marine Engineering

## **1 Scope**

### **1.1 Purpose**

This Statement of Work (SOW) defines the technical and performance requirements for the replacement of the 10m<sup>3</sup> Evaporator, one (1) per vessel, on a Class 1100, two (2) in total; CCGS Edward Cornwallis and CCGS Sir William Alexander. The evaporators shall be identical.

The new Evaporator will be purchased under the actual contract but the actual installation and Set to Work (STW) will be done under a future contract by a shipyard to be selected.

The Evaporator replacement shall be accomplished by customization of Commercial Off The Shelf (COTS) components and/or by design, Integrated Logistics Support (ILS) and documentation.

### **Implementation phase by a Shipyard**

The intention of Coast Guard is to have the new evaporators installed during a future refit contract. At the bidding stage of this future refit contract, the Contractor will be identified as the supplier, Original Equipment Manufacturer (OEM), to be on hand for the installation, testing, commissioning, training and trials of the new evaporators.

### **1.2 Objectives of the Evaporator Replacement**

The fundamental objectives of the Evaporator replacement are to:

1. Sustain the existing functions of the Evaporator by replacing the Evaporator with modern, fully supportable technology within the footprint shown in Section 3.1 Technical Data.
2. Be approved by one (1) of the recognized Classification Society in Canada;
3. Be approved by Transport Canada under Delegated Statutory Inspection Program (DSIP);
4. Produce water that can meet the current Health Canada Standards;
5. Use the vessel's existing electrical power and wires available; and
6. Be capable of using steam as an emergency heat source;

## **2 Evaporator Delivery**

### **2.1 General**

The Contractor shall procure/design, customize, manufacture, integrate, test, deliver factory Acceptance Test and deliver an evaporator required to satisfy the requirements of this SOW.

### **2.2 Design Engineering Services**

The design engineering shall be IAW with this SOW.

### 2.3 Deliverables

The Contractor shall produce and deliver the Two (2) Evaporators IAW Table 1, Two (2) set of Special Purpose Tools (SPT) IAW Table 2, Two (2) set of Spare parts IAW Table 3, One (1) set of Design Approval IAW Table 4, One (1) set of Proof of Performance IAW Table 5, One (1) set of Certification IAW Table 6 and Two (2) set of Documentation set IAW Table 7.

**Table 1: Evaporator**

Component	Qty	Locations and or Comments
Evaporator	2	a) CCGS Edward Cornwallis b) CCGS Sir William Alexander  Delivery point for both evaporators:  Coast Guard O5C Warehouse, door # 1,13 Akerley Boulevard, Dartmouth, Nova Scotia.

**Table 2: Special Purpose Tools Set**

Installation Support	Qty	Comments
Special Purpose Tools (SPT)	2	For the maintenance of the Evaporator, to be approved by the TA

**Table 3: Spares Parts Set**

Title	Qty	Comments
Spares Parts	2	Spares Component types and quantities set for each evaporator shall be proposed by the Contractor and approved by Technical Authority (TA). The quantities per Evaporator shall be able to meet the first Five (5) years of maintenance and as a minimum it must include the following components: a) Complete Set of Spare Plate Gaskets; b) Anti-Scaling chemical, 50 liters;

**Table 4: Design Approval**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Report by the Contractor that confirms that the Evaporator design can meet the SOW requirements	1	Once the contractor has finalized its design, he shall demonstrate that the requirement listed in the SOW are met.  The design is subject to TA approval.

**Table 5: Proof of Performance**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Proof of performance	1	A. The Contractor shall demonstrate that the quality of the water produced with the evaporator is to current Health Canada Standards.  B. The Contractor shall demonstrate that the evaporator produce the nominal quantity of water at the quality defined by Health Canada Standards

**Table 6: Certification**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Certification by a Classification Society recognized by Canada under the Delegated Statutory Inspection Program (DSIP)	1	The Evaporator design shall be certified by Class under marine class evaporators.

**Table 7: Documentation set**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Documentation	1	- OEM Evaporator's installation specifications and drawings in English and French
	3	- Illustrated Operation manual in English.
	1	- Illustrated Operation manual in French
		All manuals shall include the manufacturer's SPT complete with illustrated tool list and a detailed part breakdown.

NOTE:

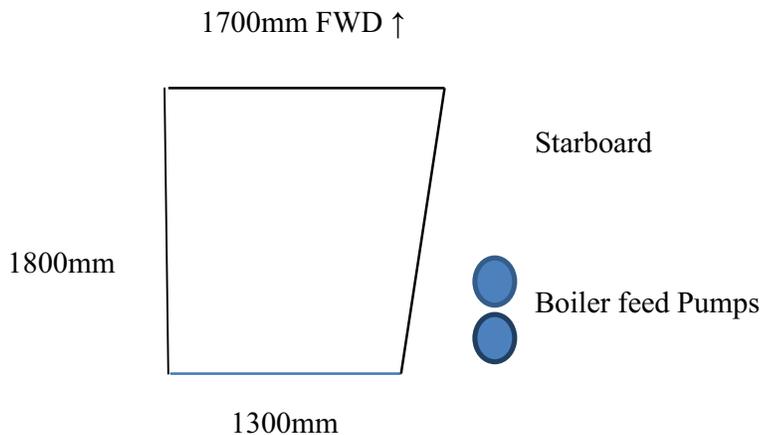
The Contractor will have to provide a Field Service Representative (FSR) during the installation of the Evaporators at the shipyard in order to ascertain that it is done in accordance with the Vessel's OEM Installation Specifications and drawings. This service will be part of a future contract to be awarded by the selected shipyard to the Contractor.

**3 New Evaporator Requirement**

**3.1 Technical Data**

- Main supply voltage 600 Volts, 3 Phase, 60 Hz;
- The total power consumption must not exceed 8 kW;
- Control voltage 120 Volts and 230 Volts, 60 Hz. Control voltage must be produced from the evaporator's own control panel. It shall not be supplied externally from the ship systems;
- Steam is available at 5 to 7 Bar at a flow of 490 kg/hr @ 3.77 Bar;
- Steam inlet connection is Din 32. (1 ¼");
- Salt water inlet temperature 29° C;
- Salt water inlet and outlet connections ANSI 3 inches;
- Salt water flow 36 cubic meters per hour;
- Salt water pump connections ANSI 2.5 inches;
- Jacket water inlet temperature 70°C;
- Jacket water inlet and outlet connections ANSI 3 inches; and
- Jacket water flow 34 cubic meters per hour.

The maximum footprint area available is:



The maximum height shall be no more than 1700 mm.

Note:

- The new evaporator size must not interfere with access for servicing the boiler feed pumps located in the area; and
- The service area for the evaporator shall remain within the maximum footprint area.

Piping shall be on the forward end of the evaporator with the plates sliding aft for cleaning, as the existing piping is located in that area.

The design of the evaporator must allow the evaporator's piping, following its installation, to fit into the footprint describe in the above section. At the design stage and prior to manufacturing, the piping arrangement must be approved by the TA.

### **3.2 Requirements**

1. The evaporator shall be able to produce the necessary fresh water (potable) and the machinery water needed to operate a Class 1100 vessel. The evaporator plant must be able to produce a minimum of 10m<sup>3</sup> per 24 hour period using 70 degree C engine jacket water/waste heat. The product water from the evaporator must be in accordance with the current Health Canada Standards however must be less than 10 mg/L of total dissolved solids.
2. The distilling unit shall be specifically designed in order to meet the Classification Society Requirements for marine use. The evaporator shall be a compact, self-contained packaged type and capable of unattended, automatic operation after being put on line locally. The unit shall be complete in all respects and supplied with required feed, brine, distillate, and chemical dosing pumps, valves, piping, instrumentation, and controls.
3. The evaporator shall be of a proven technology supported by documentation. The desalination process (flash evaporation, separation, and condensation) shall be done in a single titanium plate pack. The vacuum shall be contained in the plate pack. This removes the requirement for an outer shell which increases the area needed for servicing.
4. The titanium plate pack must use glueless nitrile gaskets.
5. Feed water shall be provided from the Evaporator plant salt water circulating system. An independent salt water circulating (feed) water pump shall be supplied as part of for the Evaporator plant package. There is a dedicated salt water port/suction line for the Evaporator Plant.
6. The Evaporator unit shall be designed to operate primarily on treated, hot fresh water (waste heat) from the central cooling system. Steam shall be used as an emergency heat source when required.
7. Emergency steam to the evaporator shall be supplied from the auxiliary boilers through a reducing station. The steam reducing station complete with isolating valves, pressure gauges,

reducing valves, piping, safety valves and insulation etc. shall be supplied as a package with the evaporator. The steam component must meet the specification requirements of the evaporator to operate without the use of hot water from the central cooling system.

8. The evaporator must be easy to service and clean in-situ. The evaporator frame must be designed so that the titanium plates can be slid along the frame with ample room to allow cleaning with a pressure washer and scrubbing brush, all within the footprint of the evaporator unit.
9. The evaporator shall be provided with a chemical dosing unit for feed water treatment. Power for the unit shall be provided from the control panel. The evaporator unit shall have chemical dosing pump connections provided.
10. All components or unit surfaces in direct contact with the unprocessed, partially processed, and concentrated residual feed water shall be 90-10 copper nickel material.
11. Fasteners (bolts, studs, nuts, washers, etc.) coming in contact with salt water shall be made of stainless steel suitable for salt water.
12. A control panel shall be supplied loose with the ability to be mounted directly on the evaporator. The control panel must supply power for the evaporator associated motor starters (including ejector pump), salinometer, hour meter, start/stop switches, running lights, ammeter, disconnect switch, power to the dump valve, and chemical dosing pump. Basically all equipment that is associated with the evaporator proper operation must be powered from the control panel.
13. The control panel shall include 4-20 mA output channels for the product water salinity. The control panel shall include one set of potential free contacts for a general system fault.
14. The evaporator shall include instrumentation and control for local operation including salinity display, operational status, with visual and audible alarms.
15. The evaporator shall come equipped with a Salinity Control System that will allow a continuous monitoring of the fresh water produced.
16. The ventilation design must allow the evaporator to be fully drained.
17. The evaporator must come equipped with two (2) digital water meters. The meters shall be capable of being connected to the alarm and monitoring system (VTS) for display of water produced.

- One meter is from the evaporator to the potable water tank; and
  - One meter is from the evaporator to the boiler feed water tank.
18. The evaporator water line must come equipped with an automatically operated three-way dump valve. In addition, a backflow prevent shall also be fitted in the product water line.
19. The dump valve shall be located downstream of the sensing salinity cell and upstream of the water meter. The dump valve shall automatically dump the processed water to the bilge when:
- The salinity exceeds the alarm set point, which must be operator adjustable. The desired set point of the alarm is 5 ppm sea salt, approximately 10 mg/L of total dissolved solids. The alarm must be operator manually reset before normal operation of the evaporator can take place. After a period of 2 minutes of an unacknowledged alarm, the product water pump must automatically stop; and
  - Interruption of current to the salinity indicator, solenoid or pumps. (manual reset).
20. A dry set of contacts are required on the dump valve circuit so that the opening of the dump valve can be connected to the fitted Alarm and Monitoring System (VTS). If the fitted control panel has an output for the position of the dump valve as part of the alarm fault, then the dry contacts are not required.

**ANNEX B**

**STATEMENT OF WORK (SOW)**

**FOR THE  
NEW 6m<sup>3</sup> EVAPORATOR**

**ONBOARD THE**

**CLASS 1100  
CANADIAN COAST GUARD SHIP (CCGS)**

Prepared by CCG Marine Engineering

## **1 Scope**

### **1.1 Purpose**

This Statement of Work (SOW) defines the technical and performance requirements for the new 6m3 Evaporator, one (1) per vessel, on a Class 1100, two (2) in total; CCGS Ann Harvey and CCGS George Pearkes. The evaporators shall be identical.

The new Evaporators will be purchased under the actual contract but the actual installation and Set to Work (STW) will be done under a future contract by a shipyard to be selected.

The new Evaporator shall be accomplished by customization of Commercial Off The Shelf (COTS) components and/or by design, Integrated Logistics Support (ILS) and documentation.

### **Implementation phase by a Shipyard**

The intention of Coast Guard is to have the new evaporators installed during a future refit contract. At the bidding stage of this future refit contract, the Contractor will be identified as the supplier, Original Equipment Manufacturer (OEM), to be on hand for the installation, testing, commissioning, training and trials of the new evaporators.

### **1.2 Objectives of the New Evaporator**

The fundamental objectives of the new Evaporator are to:

1. Be a modern Evaporator with fully supportable technology and fit within the footprint shown in Section 3.1 Technical Data.
2. Be approved by one (1) of the recognized Classification Society in Canada;
3. Be approved by Transport Canada under Delegated Statutory Inspection Program (DSIP);
4. Produce water that can meet the current Health Canada Standards;
5. Use the vessel's existing electrical power and wires available; and
6. Be capable of using steam as an emergency heat source;

## **2 Evaporator Delivery**

### **2.1 General**

The Contractor shall procure/design, customize, manufacture, integrate, test, deliver factory Acceptance Test and deliver an evaporator required to satisfy the requirements of this SOW.

### **2.2 Design Engineering Services**

The design engineering shall be IAW with this SOW.

### 2.3 Deliverables

The Contractor shall produce and deliver the Two (2) Evaporators IAW Table 1, Two (2) set of Special Purpose Tools (SPT) IAW Table 2, Two (2) set of Spare parts IAW Table 3, One (1) set of Design Approval IAW Table 4, One (1) set of Proof of Performance IAW Table 5, One (1) set of Certification IAW Table 6 and Two (2) set of Documentation set IAW Table 7.

**Table 1: Evaporator**

Component	Qty	Locations and or Comments
Evaporator	2	a) CCGS Ann Harvey b) CCGS George Pearkes  Delivery point for both evaporators:  Coast Guard Tech Stores, Southside Base, 280 Southside Rd, St. Johns, Nfld. A1C 5X1

**Table 2: Special Purpose Tools Set**

Installation Support	Qty	Comments
Special Purpose Tools (SPT)	2	For the maintenance of the Evaporator, to be approved by the TA

**Table 3: Spares Parts Set**

Title	Qty	Comments
Spares Parts	2	Spares Component types and quantities set for each evaporator shall be proposed by the Contractor and approved by Technical Authority (TA). The quantities per Evaporator shall be able to meet the first Five (5) years of maintenance and as a minimum it must include the following components: a) Complete Set of Spare Plate Gaskets; b) Anti-Scaling chemical, 50 liters;

**Table 4: Design Approval**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Report by the Contractor that confirms that the Evaporator design can meet the SOW requirements	1	Once the contractor has finalized its design, he shall demonstrate that the requirement listed in the SOW are met.  The design is subject to TA approval.

**Table 5: Proof of Performance**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Proof of performance	1	A. The Contractor shall demonstrate that the quality of the water produced with the evaporator is to current Health Canada Standards.  B. The Contractor shall demonstrate that the evaporator produce the nominal quantity of water at the quality defined by Health Canada Standards

**Table 6: Certification**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Certification by a Classification Society recognized by Canada under the Delegated Statutory Inspection Program (DSIP)	1	The Evaporator design shall be certified by Class under marine class evaporators.

**Table 7: Documentation set**

<b>Title</b>	<b>Qty</b>	<b>Comments</b>
Documentation	1	- OEM Evaporator's installation specifications and drawings in English and French
	3	- Illustrated Operation manual in English.
	1	- Illustrated Operation manual in French
		All manuals shall include the manufacturer's SPT complete with illustrated tool list and a detailed part breakdown.

NOTE:

The Contractor will have to provide a Field Service Representative (FSR) during the installation of the Evaporators at the shipyard in order to ascertain that it is done in accordance with the Vessel's OEM Installation Specifications and drawings. This service will be part of a future contract to be awarded by the selected shipyard to the Contractor.

### **3 New Evaporator Requirement**

#### **3.1 Technical Data**

- Main supply voltage 600 Volts, 3 Phase, 60 Hz;
- The total power consumption must not exceed 8 kW;
- Control voltage 120 Volts and 230 Volts, 60 Hz. Control voltage must be produced from the evaporator's own control panel. It shall not be supplied externally from the ship systems;
- Steam is available at 5 to 7 Bar at a flow of 490 kg/hr @ 3.77 Bar;
- Steam inlet connection is ANSI 2 inches;
- Salt water inlet temperature 29° C;
- Salt water inlet and outlet connections ANSI 2 ½ inches;
- Salt water pump connections ANSI 2.5 inches;
- Jacket water inlet temperature 70°C;
- Jacket water inlet and outlet connections ANSI 3 inches; and

The maximum footprint area available is:

Maximum Length 1750 mm

Maximum Width 1300 mm

Maximum Height 1600mm

Note:

- The service area for the evaporator shall remain within the maximum footprint area.

The design of the evaporator must allow the evaporator's piping, following its installation, to fit into the footprint describe in the above section. At the design stage and prior to manufacturing, the piping arrangement must be approved by the TA.

#### **3.2 Requirements**

1. The evaporator shall be able to produce the necessary fresh water (potable) and the machinery water needed to operate a Class 1100 vessel. The evaporator plant must be able to produce a minimum of 6 m<sup>3</sup> per 24 hour period using 70 degree C engine jacket water/waste heat. The product water from the evaporator must be of less than 10 mg/L of total dissolved solids.
2. The distilling unit shall be specifically designed in order to meet the Classification Society Requirements for marine use. The evaporator shall be a compact, self-contained packaged

type and capable of unattended, automatic operation after being put on line locally. The unit shall be complete in all respects and supplied with required feed, brine, distillate, and chemical dosing pumps, valves, piping, instrumentation, and controls.

3. The evaporator shall be of a proven technology supported by documentation. The desalination process (flash evaporation, separation, and condensation) shall be done in a single titanium plate pack. The vacuum shall be contained in the plate pack. This removes the requirement for an outer shell which increases the area needed for servicing.
4. The titanium plate pack must use glueless nitrile gaskets.
5. Feed water shall be provided from the Evaporator plant salt water circulating system. An independent salt water circulating (feed) water pump shall be supplied as part of for the Evaporator plant package. There is a dedicated salt water port/suction line for the Evaporator Plant.
6. The Evaporator unit shall be designed to operate primarily on treated, hot fresh water (waste heat) from the central cooling system. Steam shall be used as an emergency heat source when required.
7. Emergency steam to the evaporator shall be supplied from the auxiliary boilers through a reducing station. The steam reducing station complete with isolating valves, pressure gauges, reducing valves, piping, safety valves and insulation etc. shall be supplied as a package with the evaporator. The steam component must meet the specification requirements of the evaporator to operate without the use of hot water from the central cooling system.
8. The evaporator must be easy to service and clean in-situ. The evaporator frame must be designed so that the titanium plates can be slid along the frame with ample room to allow cleaning with a pressure washer and scrubbing brush, all within the footprint of the evaporator unit.
9. The evaporator shall be provided with a chemical dosing unit for feed water treatment. Power for the unit shall be provided from the control panel. The evaporator unit shall have chemical dosing pump connections provided.
10. All components or unit surfaces in direct contact with the unprocessed, partially processed, and concentrated residual feed water shall be 90-10 copper nickel material.
11. Fasteners (bolts, studs, nuts, washers, etc.) coming in contact with salt water shall be made of stainless steel suitable for salt water.

12. A control panel shall be supplied loose with the ability to be mounted directly on the evaporator. The control panel must supply power for the evaporator associated motor starters (including ejector pump), salinometer, hour meter, start/stop switches, running lights, ammeter, disconnect switch, power to the dump valve, and chemical dosing pump. Basically all equipment that is associated with the evaporator proper operation must be powered from the control panel.
13. The control panel shall include 4-20 mA output channels for the product water salinity. The control panel shall include one set of potential free contacts for a general system fault.
14. The evaporator shall include instrumentation and control for local operation including salinity display, operational status, with visual and audible alarms.
15. The evaporator shall come equipped with a Salinity Control System that will allow a continuous monitoring of the fresh water produced.
16. The ventilation design must allow the evaporator to be fully drained.
17. The evaporator must come equipped with two (2) digital water meters. The meters shall be capable of being connected to the alarm and monitoring system (Techsol) for display of water produced.
  - One meter is from the evaporator to the potable water tank; and
  - One meter is from the evaporator to the boiler feed water tank.
18. The evaporator water line must come equipped with an automatically operated three-way dump valve. In addition, a backflow prevent shall also be fitted in the product water line.
19. The dump valve shall be located downstream of the sensing salinity cell and upstream of the water meter. The dump valve shall automatically dump the processed water to the bilge when:
  - The salinity exceeds the alarm set point, which must be operator adjustable. The desired set point of the alarm is 5 ppm sea salt, approximately 10 mg/L of total dissolved solids. The alarm must be operator manually reset before normal operation of the evaporator can take place. After a period of 2 minutes of an unacknowledged alarm, the product water pump must automatically stop; and
  - Interruption of current to the salinity indicator, solenoid or pumps. (manual reset).
20. A dry set of contacts are required on the dump valve circuit so that the opening of the dump valve can be connected to the fitted alarm and monitoring system (Techsol). If the fitted

control panel has an output for the position of the dump valve as part of the alarm fault, then the dry contacts are not required.