

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
Pacific Region
401 - 1230 Government Street
Victoria, B.C.
V8W 3X4
Bid Fax: (250) 363-3344

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

Title - Sujet BREATHING AIR COMPRESSOR & FILTRATI		
Solicitation No. - N° de l'invitation W3555-136063/A	Date 2012-06-20	
Client Reference No. - N° de référence du client W3555-136063		
GETS Reference No. - N° de référence de SEAG PW-\$VIC-242-5944		
File No. - N° de dossier VIC-2-35021 (242)	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-07-31		Time Zone Fuseau horaire Pacific Daylight Saving Time PDT
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: Szczesniak, Michal		Buyer Id - Id de l'acheteur vic242
Telephone No. - N° de téléphone (250) 363-8312 ()		FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE CAPE BRETON ATTN CONTRACT OFF. STN FORCES P.O.BOX 17000 BLDG 581 VICTORIA British Columbia V9A7N2 Canada		

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

Public Works and Government Services Canada - Pacific
Region
401 - 1230 Government Street
Victoria, B. C.
V8W 3X4

Delivery Required - Livraison exigée See Herein	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

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION

1. Security Requirement
2. Requirement
3. Debriefings

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions
2. Submission of Bids
3. Enquiries - Bid Solicitation
4. Applicable Laws
5. Improvement of Requirement During Solicitation Period

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures
2. Basis of Selection

PART 5 - CERTIFICATIONS

1. Certifications Precedent to Contract Award

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement
2. Requirement
3. Standard Clauses and Conditions
4. Term of Contract
5. Authorities
6. Payment
7. Invoicing Instructions
8. Certifications
9. Applicable Laws
10. Priority of Documents
11. Insurance
12. Delivery, Inspection and Acceptance
13. Defence Contract
14. Canadian Forces Site Regulations

List of Annexes:

Annex A Requirement
Annex B Pricing Schedule

PART 1 - GENERAL INFORMATION**1. Security Requirement**

There is no security requirement associated with the requirement.

2. Requirement

The requirement is detailed under Article 2 of the resulting contract clauses.

3. Debriefings

After contract award, 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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS**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 (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) 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 (2012-03-02) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

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.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than fourteen (14) 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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

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

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.

5. Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the

suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least fourteen (14) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Section I: Technical Bid (2 hard copies)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

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>). To assist Canada in reaching its objectives, bidders are encouraged to:

- 1) use paper containing fibre certified as originating from a sustainably-managed forest and/or 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

Bidders must demonstrate how they meet each mandatory requirement identified in Annex A.

Bidders must provide all relevant literature with their submitted bids in order to demonstrate how they meet each mandatory requirement.

Answers stating “compliance”, “comply”, “yes”, or other types of positive type responses without substantive documentation or literature to justify compliance will be deemed as non-compliant and no further evaluation of the bid will be performed.

Sample Table provided to show suggested layout of technical bid to demonstrate compliance with each mandatory requirement:

Identifies Line #	Description of Mandatory Requirement	Bid Meets Yes/No	Reference to Supplied Material to Substantiate Yes
99.9.9	Must be accurate to 0.0001”	Yes	Refer to Pg 3 in supplied brochure.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment and Annex B. The total amount of Goods and Services Tax (GST) or Harmonized Sales Tax (HST) must be shown separately, if applicable.

Bidders should indicate the currency being used in their proposal. Should the currency not be indicated, it will be assumed that it is Canadian.

1.1 Exchange Rate Fluctuation

The requirement does not provide for exchange rate fluctuation protection. Any request for exchange rate fluctuation protection will not be considered and will render the bid non-responsive.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

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.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

The mandatory technical criteria are identified in Annex A.

1.2 Financial Evaluation

- 1. The price of the bid will be evaluated in Canadian Dollars, the Goods and Services Tax or the Harmonized Sales Tax excluded, Delivered Duty Paid (DDP) Destination Incoterms 2000, and Canadian customs duties and excise taxes included.
- 2. Bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The nominal noon exchange rate given by the Bank of Canada (<http://www.bankofcanada.ca/en/rates/exchform.html>) in effect on the solicitation closing date will be applied as a conversion factor to the offers submitted in foreign currency.

2. Basis of Selection - Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications to be awarded a contract. Canada will declare a bid non-responsive if the required certifications are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

1. Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

1.1 Federal Contractors Program - Certification

Suppliers who are subject to the Federal Contractors Program (FCP) and have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive federal government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

- () is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada;
- () is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;
- () is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;
- () has not been declared an ineligible contractor by HRSDC, and has a valid certificate number as follows: _____ .

Further information on the FCP is available on the HRSDC Web site:
<http://www.hrsdc.gc.ca/eng/labour/equality/fcp/index.shtml>.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Contractor must provide the items detailed at Annexes A, B, and C.

2.1 Electrical Equipment

All electrical equipment supplied under the Contract must be certified or approved for use in accordance with the Canadian Electrical Code, Part 1, before delivery, by a certification organization accredited by the Standards Council of Canada.

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 (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) Manual issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2012-03-02), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before **March 30, 2013**.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Michal Szczesniak
A/Supply Team Leader
Public Works and Government Services Canada
Acquisitions, Victoria
1230 Government Street, Suite 401
Victoria, BC V8W 3X4 Canada

Telephone: 1-250-363-8312

E-mail address: michal.szczesniak@pwgsc-tpsgc.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.

5.2 Project Authority

The Project Authority for the Contract is:

Department of National Defence

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.

5.3 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: _____
Facsimile: _____
E-mail: _____

6. Payment

6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex B, for a total contract cost of \$_____. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

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.

6.2 Taxes - Foreign-based Contractor

Unless specified otherwise in the Contract, the price includes no amount for any federal excise tax, state or local sales or use tax, or any other tax of a similar nature, or any Canadian tax whatsoever. The price, however, includes all other taxes. If the Work is normally subject to federal excise tax, Canada will, upon request, provide the Contractor a certificate of exemption from such federal excise tax in the form prescribed by the federal regulations.

Canada will provide the Contractor evidence of export that may be requested by the tax authorities. If, as a result of Canada's failure to do so, the Contractor has to pay federal excise tax, Canada will reimburse the Contractor if the Contractor takes such steps as Canada may require to recover any payment made by the Contractor. The Contractor must refund to Canada any amount so recovered.

6.3 Single Payment

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all such documents have been verified by Canada;
- c) the Work delivered has been accepted by Canada.

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 distributed as follows:

The original and one (1) copy must be forwarded to the following address for certification and payment:

8. Certifications

Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in British Columbia (*or another Canadian province or territory as specified by the Bidder in its bid*).

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 (2012-03-02) General Conditions - Goods (Medium Complexity);
- (c) Annex A, Requirement;
- (d) Annex B, Pricing Schedule;
- (e) the Contractor's bid dated _____.

11. Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

12. Delivery, Inspection and Acceptance

12.1 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered Delivered Duty Paid (DDP) CFB Esquimalt, Victoria, BC Incoterms 2000 for shipments from a commercial contractor.

12.2 Excess Goods

The quantity of goods to be delivered by the Contractor is specified in the Contract. The Contractor remains liable for any shipment in excess of that quantity whether the excess quantity is shipped voluntarily or as a result of an error by the Contractor. Canada will not make any payment to the Contractor for goods shipped in excess of the specified quantity. Canada will not return the said goods to the Contractor unless the Contractor agrees to pay for all the costs related to the return, including but not limited to administrative, shipping and handling costs. Canada will have the right to deduct such costs from any invoice submitted by the Contractor.

12.3 Wood Packaging Materials

All wood packaging materials used in international shipping must conform to the "Guidelines for Regulating Wood Packaging Material in International Trade" - ISPM 15 (International Standards for Phytosanitary Measures - <http://www.spc.int/pps/ispm.htm>).

Pertinent additional information on Canada's import and export programs is provided in the following Canadian Food Inspection Agency policy directives:

D-98-08 - Entry Requirements for Wood Packaging Materials Produced in All Areas Other Than the Continental United States (<http://www.inspection.gc.ca/english/plaveg/protect/dir/d-98-null08e.shtml>); and

D-01-05 - The Canadian Wood Packaging Certification Program (CWPCP) (<http://www.inspection.gc.ca/english/plaveg/protect/dir/d-01-null05e.shtml>).

12.4 Inspection and Acceptance

The Project Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

13. Defence Contract

The Contract is a defence contract within the meaning of the Defence Production Act, R.S.C. 1985, c. D-1, and must be governed accordingly.

Title to the Work or to any materials, parts, work-in-process or finished work must belong to Canada free and clear of all claims, liens, attachments, charges or encumbrances. Canada is entitled, at any time, to remove, sell or dispose of the Work or any part of the Work in accordance with section 20 of the Defence Production Act.

14. Canadian Forces Site Regulations

The Contractor must comply with all standing orders or other regulations, instructions and directives in force on the site where the Work is performed.

Annex A - Requirement

1.0 Operating Conditions

This specification covers the minimum requirements for one (1) high pressure, high volume, breathing air quality compressor (HPHVBA) and filtration system to be used for submarine support purposes. The compressor system must be supplied and installed in a self-contained towable trailer. The system will be utilized in a marine ship repair environment. The trailer and enclosure must be designed to operate 100% outdoors and withstand the environmental elements in Victoria, BC, Canada.

2.0 Minimum Mandatory Requirements

All statements and requirements identified under Section 2.0 and respective sub-sections are deemed to be minimum mandatory requirements.

2.1 Legislation and Bylaws

- 2.1.1 The supplied HPHVBA compressor system, components, piping, and filters must adhere to the most current versions of the following standards/regulations:

2.1.1.1 CAN/CSA Z180.1-00 (Compressed Breathing Air and Systems);

2.1.1.2 CSA Z275.2 (Occupational safety code for diving operations);

2.1.1.3 CSA Z94.4 (Selection, use, and care of respirators);

2.1.1.4 ASME B31.1 ; and

2.1.1.5 ASME B31.3.

- 2.1.2 The main compressor pressure components and all pressure components within the pressure system for the HPHSBA compressor must have a Canadian Registration Number (CRN) issued in accordance with the Boiler and Pressure Vessel Act of Canada to the manufacturer.

- 2.1.3 The manufacturer must be licensed in the Province of British Columbia with the BC Safety Authority to design, fabricate, and install boiler and pressure

systems.

- 2.1.4 All electrical controls, contactors, switches, and other components that may be electrically energized or used within the compressed air system must meet Canadian Standards Association (CSA) certifications and the entire system must be CSA certified.

2.2 HPHVBA Compressor Requirements

- 2.2.1 The supplied compressor system must be capable of producing 65 standard cubic feet per minute (SCFM) at 5000 pounds per square inch (psi) minimum continuously.
- 2.2.2 The supplied compressor must be a four-stage type design normally used to supply high-pressure high-volume air requirements.
- 2.2.3 The supplied compressor must be designed to operate at 1200 RPM maximum to help extend compressor and component life span.
- 2.2.4 All components within the compressed air system that are exposed to the compressed air must be rated to 5000 psi minimum.
- 2.2.5 The compressors drive gear must be rated for an operating life of a minimum of 30,000 hours.
- 2.2.6 The compressors cylinders must be hardened to provide a minimum of 10,000 hours of operating life.
- 2.2.7 The compressor must be designed to use a mineral oil lubricant to increase compressor life.
- 2.2.8 The compressor oil operating pressure must be within the range of 44 to 72 psi.
- 2.2.9 The oil pressure lubrication system must lubricate the compressor top end in the higher stages. A splash type lubrication system is acceptable for the drive gear and other rotating components.
- 2.2.10 The compressor must be equipped with a full flow replaceable oil filter.
- 2.2.11 The HPHVBA system must be equipped with the following operator controls, gauges, and safety features:

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- 2.2.11.1 The compressor must be controlled by a programmable logic controller (PLC) type controller.
- 2.2.11.2 The motor must be capable of receiving an operating signal from either the PLC or a manual On/Off type switch.
- 2.2.11.3 The motor must be capable of being shut down by a signal from the air purification system, moisture monitor, or CO monitor through the PLC controller.
- 2.2.11.4 The system must include individual gauges to monitor each stage of the compressor cycle. These gauges must monitor temperature, compression pressure, and oil pressure.
- 2.2.11.5 The control system must include a high temperature sensor that can shutdown the compressor and be overridden if required. The sensor must provide both a visual and an audible alarm.
- 2.2.11.6 The control system must include a low oil pressure sensor or switch that can shutdown the compressor and be overridden if required. The sensor or switch must provide both a visual and an audible alarm.
- 2.2.11.7 Each stage of the compressor must include safety relief valves to prevent overpressure at any stage.
- 2.2.11.8 The control system must include an hour meter to monitor compressor run time for filter and cartridge replacement times.
- 2.2.11.9 The control system must include a programmable cycle meter to control the automatic draining of condensate from the compressor system.
- 2.2.12 The entire compressor, filters, controls, and safety features must be fully installed into a self-contained towable trailer.
- 2.2.13 The compressor must be equipped with inter stage separators. The inter stage separators for the 2nd and 3rd stages of the compressor must include safety relief valves.
- 2.2.14 The compressor must include a final mechanical separator with a coalescer type oil removal cartridge including a final safety relief valve as part of the purification system.

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- 2.2.15 The compressor must be equipped with an air purification system that adheres to CSA Z180.1-00 and Z275.2.
- 2.2.16 The supplied compressor must be equipped with an internal block heater to heat the oil in the crank case of the compressor.
- 2.2.17 Cooling of the compressor, its components, and any coolers in the system must be accomplished using a fan type cooling system.
- 2.2.18 The system must be outfitted with an automated condensate drain system controlled by the PLC to ensure any liquids are drained from the compressor between stages.
- 2.2.19 Compressor and electric motor must be mounted with independent anti-vibration mounts.
- 2.2.20 Compressor must be belt driven and not direct driven. Compressor must be driven by a minimum of 3 drive belts. Compressor must be capable of continued operation even in the event of up to two drive belts failing.
- 2.2.21 Electric motor supplied to power compressor must be a commercial marine construction, totally enclosed, fan cooled type unit.
- 2.2.22 The compressor must be equipped with a moisture monitoring system that will provide a visual warning when the air quality begins to decline as per CSA Z180.1-00 standard or CSA Z275.2.
- 2.2.23 The system must be actuated and begin providing a warning between 2 to 7 hours before the filters can no longer meet the above breathing air specifications.
- 2.2.24 Once the system can no longer maintain the breathing air to the required specifications, the moisture monitoring system must be capable of completely shutting down the entire compressor system.
- 2.2.25 The system must be equipped with an inline dew point meter.
- 2.2.26 The system must be equipped with an inline carbon monoxide (CO) monitor with a regulator and calibration gas.
- 2.2.27 The CO monitor must include a calibration gas for testing and calibration. The monitor must include a connection point compatible with supplied calibration gas.

- 2.2.28 The compressor must be equipped with a regenerative type dryer which must include a minimum of two replaceable cartridges filters and an additional final purifier located downstream of the dryer to provide breathing quality air.
- 2.2.29 The supplied regenerative type dryer system must be a heatless type unit.
- 2.2.30 The final purifier must include filters to remove residual oil vapors to ensure the breathing quality air is both tasteless and odorless as required for breathing quality air.
- 2.2.31 The compressor system must be capable of reaching a minimum dew point of -45 degrees Celsius.

2.3 Trailer Requirements

- 2.3.1 The supplied fully enclosed trailer must not exceed 78 inches wide by 160 inches long by 84 inches high for the external measurements of the enclosure. Height measurement is from the ground to the top most part of trailer. Length includes hitch, open length of doors is not included in the dimension measurements.
- 2.3.2 The supplied trailer must be of a tandem axle type design with a per axle weight rating of 5000 pounds minimum.
- 2.3.3 The supplied trailer must have a gross vehicle weight (GVW) rating of 8500 pounds minimum.
- 2.3.4 The supplied trailer must be equipped with 15 inch diameter wheels and tires rated for the appropriate weight load for the axels minimum.
- 2.3.5 Each axle must include a minimum of 2 tires and wheels.
- 2.3.6 The supplied trailer must be supplied with a minimum of one (1) spare tire and wheel identical to the ones installed onto the axles. The spare tire and wheel must be securely stored outside in the front of the trailer.
- 2.3.7 Each wheel on the supplied trailer must be equipped with electric trailer brakes and connected to a tow vehicle via a standard 7 pin trailer connector and breakaway protection system.

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- 2.3.8 The supplied trailer must be equipped with marker lights, signal lights, and brake lights. Lights must be light emitting diode (LED) type.
- 2.3.9 The trailer must be equipped with interior lighting powered by both 12 VDC and 120 VAC type lighting, all 12 VDC type lighting must be white LED type lights.
- 2.3.10 The supplied trailer and enclosure must be constructed of materials suitable to withstand outside storage and operation 100 % of the time in a marine saltwater environment within Victoria, BC, Canada.
- 2.3.11 The supplied trailer must be equipped with barn type doors on the rear to provide full opening and access to the compressor and filtration systems.
- 2.3.12 Rear doors must latch using a cam lock type system normally used on commercial trailers or sea containers.
- 2.3.13 The floor of the trailer must be manufactured and designed to carry a minimum load of 4000 pounds within the trailer.
- 2.3.14 The compressor controller, gauges, monitors, and hour and cycle meters must be mounted into a recessed panel mounted on the curb side of the trailer where complete compressor control and monitoring capabilities must be available from this location.
- 2.3.15 The recessed control panel must include a windowed access door that is hinged at the top and swings up and out of the way, this door must be held open by a minimum of 2 gas type assist shocks normally used for this application.
- 2.3.16 The control panel opening must not exceed a 24 inch by 24 inch overall size.
- 2.3.17 The control panel door must include a sealing system to ensure when closed no contaminants may enter the system when in operation or transit.
- 2.3.18 The control panel must be located vertically within 36 inches from the ground and the top of the control panel must be located no higher than 72 inches from the ground.
- 2.3.19 The control panel door must include a strap or pull cord to allow all users to easily reach and close the door from the open position.

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- 2.3.20 The supplied trailer must be equipped with suitable air intake, located on the curb side of the trailer.
- 2.3.21 The supplied trailer must be equipped with suitable air exhaust, located on the road side of the trailer.
- 2.3.22 Both the air intake and air exhaust ports must include suitable finger safe screens to prevent body parts or foreign objects from entering or exiting system.
- 2.3.23 Both the air intake and air exhaust ports must be equipped with an automatic louver opening system that is controlled by the compressor PLC.
- 2.3.24 The intake and exhaust louvers must close completely and provide a suitable seal when unit is in transit or not in operation.
- 2.3.25 The intake and exhaust openings and louvers must be designed to provide protection from weather infiltration during unit operation. This must include a rain gutter and louvers that are designed so that the opening is directed towards the ground.
- 2.3.26 The intake and exhaust louver openings must be designed with a removable panel that can be installed during transit or storage to prevent unwanted materials from entering system during compressor inactivity.
- 2.3.27 All openings and doors on trailer must be designed with a seal to prevent water and dirt infiltration during towing and storage.
- 2.3.28 All openings and doors must be keyed with keys that are identical. A minimum of four (4) keys must be provided with the equipment.
- 2.3.29 The entire enclosure must be insulated to a minimum thickness of 4 inches. The insulation must have a sound reducing rating and be a heavy batt type such as Roxul that will not compress or sag within the walls as typical fiberglass insulation tends to do.
- 2.3.30 All openings on the trailer must have drip rails or rain gutters above to minimize water running down the trailer side and into an opening.
- 2.3.31 The enclosure must be removable from the trailer deck for compressor service or repair.

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- 2.3.32 All connections from the system to the control panel on the enclosure must be connected using MIL-SPEC type electrical connectors, and must include sealed screw on covers.
- 2.3.33 The enclosure must be secured to the trailer deck with lockable latches located on the inside of the enclosure.
- 2.3.34 There must be a minimum of 8 connection latches to secure the enclosure to the trailer deck.
- 2.3.35 The bottom of the enclosure must be equipped with a rubber seal to ensure that the enclosure is completely weather sealed to the trailer deck when installed.
- 2.3.36 The enclosure must be equipped with lifting eyes located in all four corners on the enclosure, labeling in English, must be installed to state these lifting points are not to lift entire system and only for lifting the enclosure off the trailer. Lettering must be a minimum of 3 inches in height and in a highly visible colour that contrasts the enclosure coloring.
- 2.3.37 The trailer must include four (4) stabilizing stands or jacks located in each corner of the unit. These must be designed to retract out of the way when being towed.
- 2.3.38 The trailer must be equipped with a pintel style hitch for towing.
- 2.3.39 The trailer must be equipped with safety chains and a manually operated jack located on the tongue.
- 2.3.40 The trailer must be supplied with wheel chocks and a storage location on the exterior of the trailer to securely store wheel chocks when not in use.
- 2.3.41 Trailer must meet all requirements to be registered to be towed and operated on the roadways in the province of British Columbia, Canada.

2.4 Maintenance Requirements

- 2.4.1 The system must be supplied with one complete set of consumable items normally required during the first preventative maintenance routine required by the manufacturer, this must include any required filters, oils, and any items not specifically mentioned that are required to be replaced during this

preventative maintenance routine.

- 2.4.2 The system must be supplied with all filters that require replacement within the breathing air system after one year of operation.

2.5 Tooling Start Up Package

- 2.5.1 All special tooling required to service compressor, filters, or accessory components must be included as part of the package.

2.6 Manuals and Documentation

- 2.6.1 The Contractor must supply a minimum of 3 copies of the manuals in English, with the supplied equipment, including a minimum of 1 hard copy. Electronic versions for the remaining 2 copies are acceptable with which two independent copies of media must be provided with the electronic versions, i.e. 2 DVD's or 2 CD's. The manuals must cover all equipment, accessories, controls, and components included with the equipment including but not limited to the compressor, trailer, filtration system, PLC controls, and auxiliary options and equipment.

3.0 Quality and Safety

3.1 Safety and Operation Labeling

- 3.1.1 The equipment must clearly identify the lifting points for the equipment.
- 3.1.2 The equipment must clearly identify the center of gravity and the center of mass of the equipment for safe lifting.
- 3.1.3 Any pinch points, hazard areas, operator safety concerns, and moving components must be clearly labeled in English.
- 3.1.4 Operating instruction labels must be clearly identified and printed in English.

3.2 Quality

- 3.2.1 The equipment must meet all operating, performance, and design requirements for the duration of the warranty period as a minimum.

3.2.2 If the equipment does not meet the specified performance within the warranty period, the Contractor must take the necessary remedial action to achieve the specified performance.

3.2.3 The equipment must be designed and constructed to be free from defects in manufacturing and workmanship.

4.0 Packaging and Transportation

4.1 All deliverables must be properly packaged, crated, and/or boxed to ensure no damage is sustained to the equipment during the transport, loading, unloading, or general handling of equipment prior to the final installation.

5.0 Installation and Training

5.1 The Contractor must perform any final part installations and/or assembly that must occur on-site after delivery in order to meet all the mandatory requirements.

5.2 The Contractor must provide on-site training on the operation, maintenance, and service of the equipment after delivery and final installation / assembly. The training will be scheduled in coordination and agreement with the Technical Authority after contract award.

6.0 Warranty

6.1 Defects in the design, materials and workmanship of the furnished goods and services must be covered by the Warranty.

Annex B - Pricing Schedule

Item	Description	U.I.	Qty.	Unit Price (DDP Destination)
A	High pressure, high volume, breathing air quality compressor (HPHVBA) and filtration system meeting the requirements specified in Annex A	Each	1	
B	Installation meeting the requirements specified in Annex A	Lot	1	
C	Training meeting the requirements specified in Annex A	Lot	1	
Sub-Total Price				
Goods & Services Tax (GST) / Harmonized Sales Tax (HST) - if applicable				
Total Price				

Pricing is inclusive of all material, labour, transportation, travel, living expenses, delivery, and customs fees.