

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

Title - Sujet WASTE WATER TREATMENT SYSTEM		
Solicitation No. - N° de l'invitation 23375-160084/A	Date 2015-06-02	
Client Reference No. - N° de référence du client 23375-160084		
GETS Reference No. - N° de référence de SEAG PW-\$\$PV-929-67426		
File No. - N° de dossier pv929.23375-160084	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-07-06		Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Martin, Doug		Buyer Id - Id de l'acheteur pv929
Telephone No. - N° de téléphone (819) 956-4037 ()		FAX No. - N° de FAX (819) 956-3814
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATURAL RESOURCES 1 HAANEL DR. ATTN: SCOTT CHAMPAGNE OTTAWA Ontario K1A1M1 Canada		

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

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

Issuing Office - Bureau de distribution

Scientific, Medical and Photographic Division / Division de
l'équipement scientifique, des produits photographiques et
pharmaceutiques
11 Laurier St./ 11 rue, Laurier
6B1, Place du Portage
Gatineau, Québec K1A 0S5

Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	WASTE WATER TREATMENT SYSTEM NATURAL RESOURCES CANADA - CANMETENERGY HAS A REQUIREMENT FOR A PROCESS WASTE WATER TREATMENT SYSTEM TO TREAT FLUE GAS SCRUBBER LIQUID EFFLUENT. THIS SYSTEM WILL BE USED IN SUPPORT OF THE OXYGEN-FIRED PRESSURIZED FLUID BED COMBUSTION PILOT PLANT FACILITY AT BUILDING 4 OF THE BELLS CORNERS COMPLEX.	23375	I - 1	1	Each	\$	\$	See Herein	

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

Natural Resources Canada has a requirement for the supply ""Waste Water Treatment System"" in accordance with the mandatory specifications at Annex "A"

Installation, training and manuals included.

3. 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

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 issued by Public Works and Government Services Canada (PWGSC). The Manual is available on the PWGSC Website:

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

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 (2014-03-01) 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. Former Public Servant (Not applicable)

4. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) 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.

5. Applicable Laws

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

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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

1. Bid Preparation Instructions

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

Section I: Technical Bid (two (2) hard copies), consisting of technical brochures/literature to verify compliancy and test data, if applicable

Section II: Financial Bid (one (1) hard copy)

Section III: Certifications (one (1) hard copy)

Section IV: Additional Information (two (2) hard copies)

Prices must appear in the financial bid only.

No prices must be indicated in any other section of the bid.

Bidders are requested to submit one quotation document with prices, and a second quotation document with prices removed.

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;
- (c) include the certifications as a separate section of the bid.
- (d) In April 2006, Canada issued a policy directing federal departments and agencies to take necessary steps to incorporate environmental considerations into the procurement process Policy of Green Procurement

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/chats-procurement/politique-policy-eng.html>).

To Assist Canada in reaching its objectives, bidders are encouraged to:

- 1) use 8.5. X 11 inch (216 mm X 279 mm) paper containing fibre certified as origination from a sustainably-managed forest and /or containing minimum 30% recycled content; and
- 2) use and enviornmentally-preferabe 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 explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

The following applies to the Requirement and bidders must provide the following information in the bid where applicable:

Product(s) Offered (To be completed by bidder)

Indicate the make and model of the product(s) offered:

Name of Manufacturer: _____

Model/Part Number: _____

Point of Manufacture/Shipping (To be completed by bidder)

The Bidder must state the point of manufacture/shipping of goods:

Location: _____ Postal Code: _____

Delivery (To be completed by bidder)

Delivery is requested by 01 September 2015, the best delivery that could be offered by the Bidder is _____.

Delivery is Mandatory by March 31, 2015.

Installation (To be completed by bidder)

On-site installation must be provided and shall be carried out by a qualified service technician.

State your best installation schedule. Installation will be carried out within _____ (_ _) calendar days of delivery and be completed within _____ (_ _) calendar days.

Documentation (To be completed by bidder)

Operator and Service Manuals must be supplied with the equipment.

Operational manuals in English available. _____ Yes.

Service manuals in English available. _____ Yes.

Operational manuals in French available. _____ Yes.

Service manuals in French available. _____ Yes.

Training (To be completed by bidder)

On-site user training must be provided for up to _____ (_ _) users. All costs associated with the on-site training must be included in the price.

On-site training will be completed within _____ (_ _) calendar days of installation.

Provide complete details of training e.g. duration, scope, etc.,

Service (To be completed by bidder)

Purchase of the system must include: regional technical support; technical phone support; support via the Internet; and support via a fax-back document system.

Response for service shall be within 24 hours or less.

Also, provide the following with your bid:

a) Location of available service facilities (after sales service and repair). List the service facilities closest to the destination.

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b) Locations of available replacement parts from consumables to major components.

c) Response time re: service calls, and escalation schedule, i.e. (how many days with no resolution to a problem until a more experienced person is called in, and from which location).

e) List the frequency of routine maintenance visits provided by a qualified service technician during the warranty period, if applicable and included in the price.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

1.1 Exchange Rate Fluctuation (Not Applicable)

1.2 SACC Manual Clauses (Not Applicable)

Section III: Certifications

Bidders must submit the certifications required under Part 5

Section IV: Additional Information

1.1 Bidder's Proposed Site or Premises Requiring Safeguard Measures (Not Applicable)

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.

All proposals submitted shall be completed in full and provide all of the information requested in the Request for Proposal (RFP) package to enable a full and complete evaluation. If the requirement is not addressed in the bidder's proposal, the proposal will be considered incomplete or non-responsive and will be rejected. The onus is on the bidder to provide all the information necessary to ensure a complete and accurate assessment.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria (see Annex "A")

1.2 Financial Evaluation

1. The price of the bid will be evaluated as follows:

A. Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Applicable Taxes excluded.

B. foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and Applicable Taxes excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.

2 Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.

3. Although Canada reserves the right to award the Contract either on an FOB plant or FOB destination, Canada requests that bidders provide prices FOB their plant or shipping point and FOB destination. Bids will be assessed on an FOB destination basis.

4. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

2. Basis of Selection

2.1 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 and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, 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 may render the bid non-responsive or constitute a default under the Contract.

1. Certifications Required Precedent to Contract Award

1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in

Section 01 Integrity Provisions

Standard Instructions - Goods or Services - Competitive Requirements (2014-03-01) 2003

Standard Instructions - Goods or Services - Non-competitive Requirements (2014-03-01) 2004

The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

Integrity Provisions Required Precedent to Contract Award

Bidders should provide, with their bids or promptly thereafter, a complete list of names of all individuals who are currently directors of the Bidder.

Family Name

Given Name(s)

Family Name

Given Name(s)

Family Name

Given Name(s)

Family Name

Given Name(s)

Family Name

Given Name(s)

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- 1.2 Federal Contractors Program for Employment Equity - Bid Certification (Not applicable)**
 - 2. Additional Certifications Required Precedent to Contract Award (Not applicable)**
 - 2.1 Canadian Content Certification (Not applcable) (Not applicable)**
 - 2.2 Status and Availability of Resources (Not applicable)**
 - 2.3 Rate or Price Certification (Not applicable)**
 - 2.4 Education and Experience (Not applicable)**

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

Natural Resources Canada has a requirement for the supply ""Waste Water Treatment System"" in accordance with the mandatory specifications at Annex ""A""

Installation, training and manuals included.

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 issued by Public Works and Government Services Canada (PWGSC). The Manual is available on the PWGSC Website: <http://sacc.pwgsc.gc.ca/sacc/index-e.jsp>.

3.1 General Conditions

2010A (2014-03-01) General Conditions - Goods (Medium Complexity),
2010C (2014-03-01) General Conditions - Services (Medium Complexity),

3.2 Supplemental General Conditions

4003 (2010-08-16) Licensed Software
4004 (2013- 04-25) Maintenance and Support Services for Licenced Software apply to and form part of the Contract.

4. Term of Contract

The contract will be force until all warranty and or optional provisions of this agreement are expired

4.1 Delivery Date

Delivery must be completed on or before *(to be filled in at contract award)*.

4.1.2 Shipping Instructions

4.1.2. Shipping Instructions - Delivery at Destination

1. Shipment shall be consigned to the destination specified, and delivered:

DDP Delivered Duty Paid Ottawa, Ontario Incoterms 2000.

2. The Contractor will be responsible for all delivery charges, administration, costs and risk of transport and customs clearance, including the payment of customs duties and taxes.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Doug Martin, Supply Specialist (PV)
Public Works and Government Services Canada
Acquisitions Branch

Commercial Consumer Products Directorate
11 Laurier Street, (44) 6A2, Phase III
Place du Portage, Hull, Quebec, K1A 0S5

Telephone: (819) 956 4037

Facsimile: (819) 956-3814

E-mail address: **doug.martin@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.

5.2 Project Authority (to be filled in only at contract award)

The Technical Authority for the Contract is:

The Project Authority named above 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

Contractor's Representative (To be completed by bidder)

The telephone number of the person responsible for :

General enquiries

Name: _____ Telephone No. _____

Facsimile No. _____ E-mail address: _____

Delivery Follow-up

Name: _____ Telephone No. _____

Facsimile No. _____ E-mail address: _____

6. Proactive Disclosure of Contracts with Former Public Servants

7. Payment

7.1 Basis of Payment - Firm Price

1. In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor shall be paid a firm price of **\$ XX.XX** (to be filled in at contract award) Goods and Services Tax or Harmonize Sales Tax extra, if applicable.
2. No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Specifications, will be authorized or paid to the

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Contractor unless such design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority prior to their incorporation in the Work.

7.2 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.

8. Invoicing Instructions

Invoicing Instructions

The Contractor must submit invoices in accordance with the information required in **Section 10, 2010A (2012-11-19) General Conditions - Goods or Services (Medium Complexity)**.

Original copy to **consignee** with one copy to the **Contracting Authority**.

Name: Doug Martin
Public Works and Government Services Canada
Acquisition Branch, CASMS
Telephone: (819) 956-4037
Facsimile: (819) 956-3814
E-Mail address: doug.martin@pwgsc.gc.ca

The Invoice contact for the Contract is: (To be filled in at time of contract award)

9. Certifications

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the associated information, or if 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.

(1,000,000)

9.1 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

9.2 SACC Manual Clauses

A2000C Foreign Nationals (Canadian Contractor)

06/06/16

A2001C Foreign Nationals (Foreign Contractor)

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B1501C
C0100C

Electrical Equipment
Discretionary Audit - Commercial Goods and/or Services

06/06/16
07/05/25

10. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

11. 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 Supplemental general conditions _____(insert number, date and title)
- (c) 2010A (2013-04-25) General Conditions - Goods (Medium Complexity),
4003 (2010-08-16) Licensed Software
4004 (2013- 04-25) Maintenance and Support Services for Licensed Software
- (c) Annex **A**, Requirement;
- (d) the Contractor's bid dated _____ as clarified on _____ " **or** ", as amended on _____

List of Annexes:**Annex "A" Mandatory Specifications**

Annex "A" Requirement

Mandatory Specifications for the Waste Water Treatment System:

Bidder must complete the following statement of compliance.

The Bidder shall indicate compliance to each item. Failure to comply with the mandatory system specifications will render your proposal non-responsive, and no further consideration will be given.

Your quote must include and list all of the components necessary to meet these mandatory specifications.

Bidders must ensure that adequate literature/technical brochure(s) are submitted at time of bid closing to support compliance with all mandatory technical criteria.

1.0 Description of Requirement

Natural Resources Canada - CanmetENERGY has a requirement for a process waste water treatment system to treat flue gas scrubber liquid effluent. This system will be used in support of the oxygen-fired pressurized fluid bed combustion (Oxy-PFBC) pilot-plant facility at Building 4 of the Bells Corners Complex (BCC) in Ottawa, Ontario, Canada.

2.0 Objective

The overall objective for Natural Resources Canada - CanmetENERGY is the construction and operation of a 1MWth nominal Oxy-PFBC pilot-plant facility. The successful contractor will be supplying one (1) turn-key waste water treatment system to treat liquid effluent from a flue gas scrubber to meet the limits required for discharge into the City of Ottawa sanitary sewer system.

3.0 Definitions and Applicable Documents

Technical Standards and Safety Act, 2000

CSA Standard B51-97

Canadian Electrical Code 2012

City of Ottawa Sewer Use By-law No. 2003 - 514

4.0 Specifications

The following information has been provided by Natural Resources Canada - CanmetENERGY to assist with the sizing and selection of equipment.

Available Site Utilities

- a. Instrument air is available at 690 kPag (100 psig)
- b. Three phase, 60Hz power voltage is available at 600/575 VAC and 208 VAC
- c. Single phase, 60Hz power voltage is available at 208 VAC and 120/115 VAC
- d. City water (Ottawa, Ontario) is available at 350 kPag (50 psig)

Material Characteristics

Waste water from flue gas scrubber to be treated:

- a. Composition:
 - a) CO₂: 0.6 wt%
 - b) Nitrate/nitrite: 0.5 wt%
 - c) Sulfate/sulfite: 0.4 wt%
 - d) HCl: traces
 - e) Na⁺: 0.9 wt%
 - f) Fly ash: traces

g) Balance: water

4.1 Mandatory Technical Criteria

The equipment must meet the following criteria:

Operational

Inlet (from process):

- a. Flowrate
- a. Min - 0 l/h
- b. Max - 120 l/h
- c. Nominal - 85 l/h
- b. Temperature
- a. Min - 10oC
- b. Max - 50oC
- c. Nominal - 25oC
- c. Pressure
- a. Min - 0 kPa(g) (atmospheric)
- b. Max - 0 kPa(g) (atmospheric)
- c. Nominal - 0 kPa(g) (atmospheric)

Page Reference in supplied documentation : _____

Outlet (to sanitary sewer):

- a. Temperature
- a. Min - 10oC
- b. Max - 60oC
- c. Nominal - 25oC
- b. Pressure
- a. Min - 0 kPa(g) (atmospheric)
- b. Max - 0 kPa(g) (atmospheric)
- c. Nominal - 0 kPa(g) (atmospheric)
- c. Composition is to satisfy the restrictions as defined in City of Ottawa Sewer Use By-law No. 2003 - 514, Schedule A, Table 1

Page Reference in supplied documentation : _____

Mechanical

- a. Materials of construction shall be suitable for specified service;

Page Reference in supplied documentation : _____

Electrical

- a. All supplied equipment must be suitable for integration with plant control system (ABB Freelance DCS using digital or analog signals, Profibus or Ethernet communication protocol);

Page Reference in supplied documentation : _____

- b. All AC motors must be TEFC;

Page Reference in supplied documentation : _____

- c. All motors must be inverter duty rated;

Page Reference in supplied documentation : _____

d. All variable frequency drives must be supplied with a line reactor;

Page Reference in supplied documentation : _____

e. Control voltage shall be 24 VDC;

Page Reference in supplied documentation : _____

f. CSA approval or equivalent required on all supplied electrical components;

Page Reference in supplied documentation : _____

g. Motors must have a local lockable disconnect.

Page Reference in supplied documentation : _____

4.2 Process Waste Water Treatment must meet the Specifications below

The contractor is to supply one (1) process waste water treatment system that is capable of operating as per the specifications below:

Operation

a. Must be able to operate continuously;

Page Reference in supplied documentation : _____

b. Must be a self-contained, turn-key system with independent control and monitoring hardware;

Page Reference in supplied documentation : _____

c. Must be able to operate, unattended, for periods of up to 96 hours.

Page Reference in supplied documentation : _____

Controls

a. Inputs and outputs for plant integration including:

1. Run permissive contact;

Page Reference in supplied documentation : _____

2. Running signal (normally open contact);

Page Reference in supplied documentation : _____

3. Fault signal (normally closed contact);

Page Reference in supplied documentation : _____

b. Remote mounted control and/or junction box;

Page Reference in supplied documentation : _____

- c. Safety interlocks to prevent movement of mechanical parts during maintenance;

Page Reference in supplied documentation : _____

- d. Local emergency stop pushbutton.

Page Reference in supplied documentation : _____

Other

- a. Initial supply of chemicals required for operation;

Page Reference in supplied documentation : _____

- b. Costs for licenses or permits, taxes, and transportation will be included;

Page Reference in supplied documentation : _____

- c. All items shall be packed and/or crated for ease of handling and in such a manner as to assure their adequate protection in shipment / storage and arrival at destination in an undamaged condition.

Page Reference in supplied documentation : _____

Documents and Drawings

The contractor must supply the following documentation:

- a. General arrangement drawings

Page Reference in supplied documentation : _____

- b. Pneumatic and electrical schematics

Page Reference in supplied documentation : _____

- c. Operation and maintenance manual (English)

Page Reference in supplied documentation : _____

- d. Description of operation sequence

Page Reference in supplied documentation : _____

4.3 Training

The contractor will provide:

- a. Two (2) days technical assistance for commissioning and training on the equipment at CanmetENERGY facility. The equipment is expected to be installed by March 2016.

5.0 Deliverables

The contractor will provide:

- a. One (1) process waste water treatment system as specified in Section 4;

Page Reference in supplied documentation : _____

Solicitation No. - N° de l'invitation

23375-160084/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

pv929

Client Ref. No. - N° de réf. du client

23375-160084

File No. - N° du dossier

pv92923375-160084

CCC No./N° CCC - FMS No/ N° VME

b. Two (2) days technical assistance for commissioning and training on the equipment at CanmetENERGY facility. The equipment is expected to be installed by March 2016;

Page Reference in supplied documentation : _____

c. Documents and drawings as specified in section 4.2.

Page Reference in supplied documentation : _____