

**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> Mobile Waste Water Treatment Plant.	
<b>Solicitation No. - N° de l'invitation</b> W8476-155286/B	<b>Date</b> 2015-09-11
<b>Client Reference No. - N° de référence du client</b> W8476-155286	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HL-657-67980	
<b>File No. - N° de dossier</b> hl657.W8476-155286	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-10-26</b>	<b>Time Zone 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> Turner, Louie	<b>Buyer Id - Id de l'acheteur</b> hl657
<b>Telephone No. - N° de téléphone</b> (819) 956-3975 ( )	<b>FAX No. - N° de FAX</b> (819) 956-5227
<b>Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:</b>  Specified Herein Précisé dans les présentes	

**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**

Fuel & Construction Products Division  
11 Laurier St./11, rue Laurier  
7A2, Place du Portage, Phase III  
Gatineau, Québec K1A 0S5

<b>Delivery Required - Livraison exigée</b> 2016-03-31	<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 (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>	



Destination Code - Code destinataire	Destination Address - Adresse de la destination	Invoice Code - Code bur.-comptable	Invoice Address - Adresse de facturation
D - 1	25 DAFC MONTREAL DET LAVAL 185 BELLEROSE OUEST LAVAL QC H7L 6A1 CANADA	W8476	DEPARTMENT OF NATIONAL DEFENCE 101 COLONEL BY DR. Attn: J. Navas, DLP 5-5-2-1 OTTAWA Ontario K1A0K2 Canada



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	MWWTP Mobile Waste Water Treatment Plant, Specifications as per Annex A and requirements as per Annex B	D - 1	W8476	2	Each	\$XXXXXXXXXXXX	2016-03-31	

Solicitation No. - N° de l'invitation

W8476-155286/B

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hl657

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

W8476-155286

File No. - N° du dossier

hl657W8476-155286

CCC No./N° CCC - FMS No/ N° VME

---

This page intentionally left blank

## TABLE OF CONTENTS

<b>PART 1 - GENERAL INFORMATION .....</b>	<b>3</b>
1.1 SECURITY REQUIREMENTS .....	3
1.2 REQUIREMENT - BID .....	3
1.3 DEBRIEFINGS .....	3
1.4 TRADE AGREEMENTS .....	3
<b>PART 2 - BIDDER INSTRUCTIONS .....</b>	<b>4</b>
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS .....	4
2.2 SACC MANUAL CLAUSES .....	4
2.3 SUBMISSION OF BIDS .....	4
2.4 ENQUIRIES - BID SOLICITATION .....	4
2.5 APPLICABLE LAWS .....	5
2.6 BEST DELIVERY DATE – BID .....	5
<b>PART 3 - BID PREPARATION INSTRUCTIONS .....</b>	<b>6</b>
3.1 BID PREPARATION INSTRUCTIONS .....	6
<b>PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION .....</b>	<b>8</b>
4.1 EVALUATION PROCEDURES .....	8
4.2 BASIS OF SELECTION .....	8
<b>PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION .....</b>	<b>9</b>
5.1 CERTIFICATION REQUIRED WITH THE BID .....	9
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION .....	9
<b>PART 6 - RESULTING CONTRACT CLAUSES .....</b>	<b>11</b>
6.1 SECURITY REQUIREMENTS .....	11
6.2 REQUIREMENT - CONTRACT .....	11
6.3 STANDARD CLAUSES AND CONDITIONS .....	11
6.4 TERM OF CONTRACT .....	12
6.5 AUTHORITIES .....	12
6.6 PAYMENT .....	14
6.7 INVOICING INSTRUCTIONS .....	14
6.8 CERTIFICATIONS .....	15
6.9 APPLICABLE LAWS .....	15
6.10 PRIORITY OF DOCUMENTS .....	16
6.11 DEFENCE CONTRACT .....	16
6.12 SACC MANUAL CLAUSES .....	ERROR! BOOKMARK NOT DEFINED.
6.13 INSPECTION AND ACCEPTANCE .....	17
6.14 RELEASE DOCUMENTS – DISTRIBUTION .....	17
6.15 PREPARATION FOR DELIVERY .....	17
6.16 SHIPPING INSTRUCTIONS .....	18
<b>ATTACHMENT 1 .....</b>	<b>19</b>

Solicitation No. - N° de l'invitation  
W8476-155286/B  
Client Ref. No. - N° de réf. du client  
W8476-155286

Amd. No. - N° de la modif.  
File No. - N° du dossier  
hl657.W8476-155286

Buyer ID - Id de l'acheteur  
hl657  
CCC No./N° CCC - FMS No./N° VME

---

**List of Annexes:**

<b>Annex A</b>	Statement of Work for Mobile Waste Water Treatment Plant (MWWTP), Appendix 1 to Annex A - MWWTP Test Procedures, Appendix 2 to Annex A - MWWTP Environment Assessment , Attachment I to Appendix 2 - Major Subsystem/EHS Aspects Assessment Table, Attachment II to Appendix 2 - Table of Hazardous Products, Attachment III to Appendix 2 - Items Containing Mercury, Attachment IV to Appendix 2 - Environmental Effects Matrix, Attachment V to Appendix 2 - Material Safety Data Sheets, Attachment VI to Appendix 2 - Listing of Possible EHS Aspects, Appendix 3 to Annex A – First Article Test Plan
<b>Annex B</b>	Contract Deliverables Pricing List
<b>Annex C</b>	Technical Bid Evaluation for MWWTP

---

## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

There is no security requirement applicable to this Contract.

### **1.2 Requirement - Bid**

The requirement is detailed under the "Line Item Detail".

### **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 of 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>) 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](#) (2015-07-03) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 90 days

### 2.2 SACC Manual Clauses

The following terms and conditions are incorporated herein

SACC Reference	Section	Date
B1000T	Condition of Material - Bid	2014-06-26

### 2.3 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.

### 2.4 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 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.



---

#### **2.4.1 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 10 days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

#### **2.5 Applicable Laws**

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

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.

#### **2.6 Best Delivery Date – Bid**

While delivery is requested by March 31, 2016, the best delivery that could be offered is

\_\_\_\_\_.

---

## PART 3 - BID PREPARATION INSTRUCTIONS

### 3.1 Bid Preparation Instructions

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

Section I: Technical Bid (3 hard copies)

Section II: Financial Bid – Annex B – Contract Deliverable Pricing List (1 hard copy)

Section III: Certifications (1 hard copy)

Prices must appear in the Annex B – Contract Deliverable Pricing List. 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) (<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 explain and demonstrate how they propose to meet the requirements and how they will carry 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.

#### 3.1.1 Equivalent Products

- 1. Products that are equivalent in form, fit, function and quality to the item(s) specified in the bid solicitation will be considered where the Bidder:
  - (a) designates the brand name and model and/or part number and NSCM/CAGE of the substitute product;
- 2. Products offered as equivalent in form, fit, function and quality will not be considered if:
  - (a) the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute product; or
  - (b) the substitute product fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.

3. In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute product to provide technical information demonstrating the equivalency (e.g. Drawing, specifications, engineering reports and/or test reports), or to demonstrate that the substitute product is equivalent to the item specified in the bid solicitation, at the sole cost of bidders, within three (3) business days (or other delay specified herein) of the request. If the bidder fails to provide the requested information within the specified delay, Canada may declare the bid non-responsive.

### 3.1.2 Substitute Products – Samples

If the Bidder offers a substitute product, Canada reserves the right to request a sample from the Bidder in order to determine its equivalency in form, fit, function, quality and performance to the item specified in the bid solicitation.

The Bidder must, upon request from the Contracting Authority, provide a sample to the Technical Authority, transportation charges prepaid, and without charge to Canada, within fifteen (15) calendar days from the date of request. The sample submitted by the Bidder will remain the property of Canada and will not be considered as part of the deliverables in any resulting contract. If the sample does not meet the requirements of the bid solicitation or the Bidder fails to comply with the request of the Contracting Authority, the bid will be declared non-responsive.

## 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. The financial bid must be submitted on the Annex "B" – Contract deliverables Pricing list

### 3.1.3 SACC Manual Clauses

The following terms and conditions are incorporated herein

SACC Reference	Section	Date
C3011T	Exchange Rate Fluctuation	2013-11-06

### 3.1.4 Progress Payments

Progress payments will not be considered unless specifically offered by PWGSC in this document.

## Section III: Certifications

Bidders must submit the certifications 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 Technical Evaluation**

All bids must be completed in full and provide all of the information requested in the bid solicitation to enable full and complete evaluation. The technical evaluation will be determined compliant or non-compliant as per Annex "C" - Technical Bid Evaluation for Mobile Waste Water Treatment

##### **4.1.1.1 Mandatory Technical Criteria**

- a) The Bidder must provide documentation with their bid showing how they meet the technical requirements detailed in Annex "A"; and
- b) The following MANDATORY factors will be taken into consideration in the evaluation of each bid:
  - (a) Technical compliance;
  - (b) Delivery requirement;
  - (c) Inspection requirement;
  - (d) Packaging requirement;
  - (e) Acceptance of terms and conditions as mentioned in the bid solicitation;
  - (f) Completion of the solicitation.

#### **4.1.2 Financial Evaluation**

##### **4.1.2.1 Mandatory Financial Criteria**

- a) The Bidder must bid firm unit prices in Canadian funds, Applicable Taxes excluded, DDP Delivered Duty Paid to destination Incoterms 2000, Customs Duties included for each item offered; and
- b) The Bidders' financial bid must be in accordance with the Basis of Payment.

### **4.2 Basis of Selection**

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 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. 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.

### 5.1 Certification Required with the Bid

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

#### 5.1.1 Declaration of Convicted Offences

As applicable pursuant to subsection Declaration of Convicted Offences of section 01 of the Standard Instructions, the Bidder must provide its bid, a completed [Declaration Form](#), to be given further consideration in the procurement process

#### 5.1.2. Product Certification

The Bidder certifies that all goods proposed conform to the specifications detailed under the "Line Item Detail".

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

### 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 – List of Names

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

### 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available [from Employment and Social Development Canada \(ESDC\) - Labour's](#) website.

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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

---

## 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 this Contract.

### 6.2 Requirement - Contract

The Contractor must provide the items detailed under the "Line Item Detail".

#### 6.2.1 Procedures for Design Change/Deviations

The Contractor must follow these procedures for any proposed design change/deviation to contract specifications.

The Contractor must complete Part 1 of the Design Change/Deviation form DND 672 and forward two (2) copies to the Technical Authority and one (1) copy to the Contracting Authority.

The Contractor will be authorized to proceed upon receipt of the design change/deviation form signed by the Contracting Authority. A contract amendment will be issued to incorporate the design change/deviation in the Contract.

#### 6.2.2 Existing Technical Publications – Translation

The Contractor grants to Canada a non-exclusive, perpetual, irrevocable and royalty-free license to translate and reproduce for government use all or any part of the technical publications supplied with the equipment delivered under the Contract. Copyright in the translation made by Canada or by independent contractors engaged by Canada will belong to Canada.

In addition to the copies which are to be delivered with the equipment, one (1) electronic copy of each publication must be forwarded to:

Department of National Defence  
MGen George Pearkes Building  
101 Colonel By Drive  
Ottawa, Canada, K1A 0K2  
Attention: Jose Navas, DLP 5-5-2-1

### 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>) issued by Public Works and Government Services Canada.

#### 6.3.1 General Conditions

2010A (2015-07-03) 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 \_\_\_\_\_.

### 6.4.2 Adherence to Delivery Schedule

The contractor will promptly give notice to the Department of Public Works and Government Services of its inability to meet the contract delivery schedule and will request therein an extension of time stating its proposed revised delivery schedule and offering consideration for such revisions. Until such notice is received and the revised delivery schedule agreed to by the Department of Public Works and Government Services, the Minister may, pursuant to the General Conditions, on the business day following the due date of delivery of any outstanding materials, **terminate the whole or part of the contract for default.**

### 6.4.3 Option to Extend the Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract to March 31, 2017 for a quantity of up to 2 additional MWWTP's under the same conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at least 30 calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

## 6.5 Authorities

### 6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Louie Turner, Supply Specialist  
Public Works and Government Services Canada  
Acquisitions Branch, Commercial Acquisition & Supply Management Sector  
Logistics, Electrical, Fuel & Transportation Directorate  
Fuel & Construction Products Division (HL)  
11 Laurier Street, 7A2, Place du Portage, Phase III  
Gatineau, QC, K1A 0S5  
Telephone: 819-956-3975 Facsimile: 819-956-5227  
E-mail address: louie.turner@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 Procurement Authority for DND

The DND Procurement Authority for the Contract is:

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

The Technical Authority for the Contract is:

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

The Technical 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 Technical Authority, however the Technical 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.

### 6.5.4 Contractor's Representative

Name and telephone number of the person responsible for :

	<b>General Enquiries</b>	<b>Delivery Follow-up</b>
Name:	_____	_____
Telephone No.:	_____	_____
Facsimile No.:	_____	_____
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, as specified in the contract at Annex B" for a cost of \$ \_\_\_\_\_ CAD. 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.

### 6.6.2 Limitation of Price

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

### 6.6.3 Terms of Payment

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

### 6.6.4 Holdback

A ten percent (10%) holdback will apply on the total price of the equipment delivered under Annex "A" on any due payment of the equipment. Release of the holdback is condition upon receipt and certified acceptance by Canada of equipment all identified related items in accordance with Annex "A".

Applicable Taxes must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous invoice.

### 6.6.5 SACC Manual Clauses

The following terms and conditions are incorporated herein

SACC Reference	Section	Date
C2611C	Customs Duties - Contractor Importer	2007-11-30
C2800C	Priority Rating	2013-01-28
C2801C	Priority Rating - Canadian-based Contractors	2014-11-27

## 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.

Each invoice must be supported by the following documents, if applicable: (a) a copy of time sheets to support the time claimed; (b) a copy of the release document and any other documents as specified in the Contract; (c) a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses; (d) a copy of the monthly progress report.

2. Invoices must be distributed as follows:

- a. The original and one (1) copy must be forwarded to the appropriate consignee(s) for certification and payment.
  - b. One (1) copy must be forwarded to:  
National Defence Headquarters  
MGen George R. Pearkes Building  
101 Colonel By Drive, Ottawa, Canada, K1A 0K2  
Attention: Jose Navas, DLP 5-5-2-1
  - c. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
3. Payment will only be made on receipt of satisfactory invoices duly supported by specified release documents and/or other documents called for under this contract.

## 6.8 Certifications

### 6.8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional 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 additional 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.

### 6.8.2 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.

## 6.9 Applicable Laws

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

## 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 (2015-07-03) Goods (Medium Complexity);
- (c) Annex A, Statement of Work for Mobile Waste Water Treatment Plant (MWWTP), Appendix 1 to Annex A - MWWTP Test Procedures, Appendix 2 to Annex A - MWWTP Environment Assessment, Attachment I to Appendix 2 - Major Subsystem/EHS Aspects Assessment Table, Attachment II to Appendix 2 - Table of Hazardous Products, Attachment III to Appendix 2 - Items Containing Mercury, Attachment IV to Appendix 2 - Environmental Effects Matrix, Attachment V to Appendix 2 - Material Safety Data Sheets, Attachment VI to Appendix 2 - Listing of Possible EHS Aspects, Appendix 3 to Annex A—First Article Test Plan;
- (d) Basis of Payment;
- (e) Attachment 1, Federal Contractors Program for Employment Equity - Certification
- (f) the Contractor's bid dated \_\_\_\_\_, as clarified on \_\_\_\_\_ **or** \_\_\_\_\_, as amended on \_\_\_\_\_

## 6.11 Defence Contract

SACC Manual clause A9006C (2012-07-16) Defence Contract

## 6.12 SACC Manual Clauses

The following terms and conditions are incorporated herein

SACC Reference	Section	Date
A1009C	Work Site Access	2008-05-12
B1501C	Electrical Equipment	2006-06-16
B4019C	United States Military Specifications and Standards	2015-02-25
B7500C	Excess Goods	2006-06-16
D2025C	Wood Packaging Materials	2013-11-06
D5510C	Quality Assurance Authority (DND) - Canadian-based Contractor	2014-06-26
D5515C	Quality Assurance Authority (DND) - Foreign-based and United States Contractor	2010-01-11
D5540C	ISO 9001:2008 Quality Management Systems - Requirements (QAC Q) <b>Items CLIN 1 and OLIN 1 apply</b>	2010-08-16
D5545C	ISO 9001:2008 - Quality Management Systems - Requirements (QAC C) <b>Items CLINs 2 – 5 and OLINs 2 – 6 apply</b>	2010-08-16
D5604C	Release Documents (DND) - Foreign-based Contractor	2008-12-12
D5605C	Release Documents (DND) - United States-based Contractor	2010-01-11
D5606C	Release Documents (DND) - Canadian-based Contractor	2012-07-16
D9002C	Incomplete Assemblies	2007-11-30
G1005C	Insurance	2008-05-12

### 6.13 Inspection and Acceptance

The Technical 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.

### 6.14 Release Documents – Distribution

The Contractor must prepare the release documents in a current electronic format and distribute them as follows:

- a. One (1) copy mailed to consignee marked: "Attention: Receipts Officer";
- b. Two (2) copies with shipment (in a waterproof envelope) to the consignee;
- c. One (1) copy to the Contracting Authority;
- d. One (1) copy to:  
National Defence Headquarters  
Mgen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
Attention: DLP 5-5-2-1
- e. One (1) copy to the Quality Assurance Representative;
- f. One (1) copy to the Contractor; and
- g. For all non-Canadian contractors, one (1) copy to:  
DQA/Contract Administration  
National Defence Headquarters  
Mgen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
E-mail: ContractAdmin.DQA@forces.gc.ca

NOTE: For into-plane refuelling contracts b, c and d above are not required.

### 6.15 Preparation for Delivery

The Contractor must prepare items for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification D-LM-008-036/SF-000, DND Minimum Requirements for Manufacturer's Standard Pack.

- 6.15.1** The equipment shall be serviced, adjusted and delivered in condition for immediate use. The equipment shall be clean when it arrives at their delivery destination

## **6.16 Shipping Instructions**

### **6.16.1 Shipping Instructions - Delivery and Destination**

1. The Contractor must ship the goods prepaid DDP - Delivered Duty Paid to the destination specified in the contract. Unless otherwise directed, delivery must be made by the most economical means. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and Applicable Taxes.
2. The Contractor must deliver the goods to Canadian Forces (CF) Supply Depots by appointment only. The Contractor or its carrier must arrange delivery appointments by contacting the Depot Traffic Section at the appropriate location shown below. The consignee may refuse shipments when prior arrangements have not been made. Canada will not be liable to pay for any additional costs if a carrier incurs extra costs.
  - (a) 25 CF Supply Depot Montreal, Montreal, Qué.  
Telephone: 1-866-935-8673 (toll free), or 514-252-2777, ext. 2363 / 4673 / 4282

## ATTACHMENT 1

### FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with such request by Canada will also render the bid non-responsive or will constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit HRSDC-Labour's ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/index.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/index.shtml)) website.

Date: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a federally regulated employer ([http://www.hrsdc.gc.ca/eng/labour/employment\\_standards/regulated.shtml](http://www.hrsdc.gc.ca/eng/labour/employment_standards/regulated.shtml)) being subject to the *Employment Equity Act* (<http://laws-lois.justice.gc.ca/eng/acts/E-5.401/>).
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- ☐ A5. The Bidder has a combined workforce in Canada of 100 or more employees; and
  - ☐ A5.1. The Bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) (<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=prfl&frm=lab1168&ln=eng>) in place with HRSDC-Labour.

OR

- ☐ A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) (<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=prfl&frm=lab1168&ln=eng>) to HRSDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to HRSDC-Labour.

B. Check only one of the following:

- ☐ B1. The Bidder is not a Joint Venture.

OR

- ☐ B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

STATEMENT OF WORK  
FOR  
MOBILE WASTE WATER TREATMENT PLANT



## TABLE OF CONTENTS

<b>1.0</b>	<b>SCOPE.....</b>	<b>4</b>
1.1	PURPOSE .....	4
1.2	BACKGROUND .....	4
1.3	INTENDED USE .....	4
1.4	ACRONYMS AND ABBREVIATIONS .....	4
<b>2.0</b>	<b>APPLICABLE DOCUMENTS.....</b>	<b>5</b>
2.1	APPLICABILITY .....	5
2.2	ORDER OF PRECEDENCE .....	5
2.3	DEPARTMENT OF NATIONAL DEFENCE PUBLICATIONS.....	5
2.4	OTHER PUBLICATIONS .....	5
<b>3.0</b>	<b>REQUIREMENTS.....</b>	<b>6</b>
3.1	GENERAL.....	6
3.2	SYSTEM DESCRIPTION .....	7
3.3	ISO CONTAINERS.....	7
3.4	WASTE WATER TREATMENT SYSTEM (WWTS) .....	10
3.5	ELECTRICAL SYSTEM .....	11
3.6	CONTROL SYSTEM.....	14
3.7	PLUMBING SYSTEM.....	14
3.8	PERFORMANCE CHARACTERISTICS .....	17
3.9	HEALTH AND SAFETY .....	18
3.10	CONSTRUCTION .....	19
3.11	IDENTIFICATION AND MARKING.....	19
3.12	CERTIFICATION.....	20
<b>4.0</b>	<b>INTEGRATED LOGISTICS SUPPORT (ILS).....</b>	<b>20</b>
4.1	TECHNICAL MANUAL .....	20
4.2	SPARE PARTS AND CONSUMABLES .....	21
4.3	TOP LEVEL DRAWING.....	22
4.4	ENVIRONMENTAL ASSESSMENT .....	22
4.5	TRAINING.....	22
4.6	PROJECT MANAGEMENT .....	24
4.7	FIRST ARTICLE .....	25
<b>5.0</b>	<b>CONTRACT DELIVERABLES.....</b>	<b>27</b>
5.1	GENERAL.....	27
5.2	LIST OF DELIVERABLES .....	27
APPENDIX 1 MOBILE WASTE WATER TREATMENT PLANT TILT, DROP SHOCK, LEAK DETECTION, AND FUNCTIONALITY TEST PROCEDURES		
APPENDIX 2 MOBILE WASTE WATER TREATMENT PLANT ENVIRONMENTAL ASSESSMENT		

APPENDIX 3 MOBILE WASTE WATER TREATMENT PLANT FIRST ARTICLE TEST  
PLAN (FATP) TEMPLATE

## 1.0 SCOPE

### 1.1 Purpose

- 1.1.1 The purpose of this Statement of Work (SOW) is to define the requirements for a Mobile Waste Water Treatment Plant (MWWTP) to be delivered to Canadian Armed Forces (CAF).

### 1.2 Background

- 1.2.1 The Canadian Armed Forces (CAF) has a requirement for an effective MWWTP that can provide a deployable capability to treat domestic waste water from a military camp.

### 1.3 Intended Use

- 1.3.1 The MWWTP is intended to be used for short (1-3 months) and medium term deployments (4-12 months) domestically or abroad throughout the year in a variety of climates.
- 1.3.2 The MWWTP will be subjected to repeated periods of sustained, rugged military usage, extended inactivity, storage and/or transport.

### 1.4 Acronyms and Abbreviations

BOD	Biochemical Oxygen Demand
CAF	Canadian Armed Forces
CFCU	Canadian Forces Containerized Unit
CSA	Canadian Standards Association
CLIN	Contract Line Item Number
CSC	Container Safety Convention
DND	Department of National Defence
EPDM	Ethylene Propylene Diene Monomer
FAT	First Article Test
FATP	First Article Test Plan
HVAC	Heating, Ventilation and Air Conditioning
ILS	Integrated Logistics Support
IP	International Protection Rating
ISO	International Standards Organization
MWWTP	Mobile Waste Water Treatment Plant
NSN	NATO Stock Number
OEM	Original Equipment Manufacturer
OLIN	Optional Line Item Number
SOW	Statement of Work
TA	Technical Authority
WWTS	Waste Water Treatment System

## 2.0 APPLICABLE DOCUMENTS

### 2.1 Applicability

- 2.1.1 The following documents form part of this SOW to the extent specified herein.

### 2.2 Order of Precedence

- 2.2.1 In the event of conflict between the content of this SOW and the referenced documents, the content of this SOW must take precedence.
- 2.2.2 Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 2.3 Department of National Defence Publications

D-02-002-001/SG-001	Standard – Identification Marking of Canadian Military Property
D-LM-008-002/SF-001	Specification – Specification for Marking for Storage and Shipment

### 2.4 Other Publications

1972 (CSC)	International Convention for Safe Containers
ASME B31.3	ASME Code for Pressure piping - Process Piping"
CSA C22.1	Canadian Electrical Code, Part I Electrical Installations
CSA C22.2	Canadian Electrical Code, Part II General Requirements
Environmental Regulations	Canadian Environmental Assessment Act
Environmental Regulations	Canadian Environmental Protection Act 1999
Environmental Regulations	Fisheries Act
General Safety	Canada Labour Code Part II
ISO 668	Series 1 Freight Containers – Classification, Dimensions and Ratings
ISO 1161	Series 1 Freight Containers - Corner Fittings
ISO 1496-1	Series 1 Freight Containers – Specification and Testing Part 1: General Cargo Containers for General Purposes
ISO 6346	Freight Containers – Coding, Identification and Marking
FED-STD-595C	Colors Used in Government Procurement
MIL-STD-810G	Environmental Engineering Considerations And Laboratory Tests
SOR/2012-139	Wastewater Systems Effluent Regulations

### 3.0 REQUIREMENTS

#### 3.1 General

- 3.1.1 The MWWTP must be capable of treating  $12 \pm 10\%$  cubic meters of wastewater per day, seven (7) days a week, and 365 days a year.
- 3.1.2 The MWWTP must be capable of handling peak loads as per below duty cycle:
- 6:00-8:00am  $3 \pm 10\%$  m<sup>3</sup> of waste water;
  - 10:00-11:00am  $2 \pm 10\%$  m<sup>3</sup> of waste water;
  - 2:00-3:00pm  $2 \pm 10\%$  m<sup>3</sup> of waste water;
  - 6:00-8:00pm  $4 \pm 10\%$  m<sup>3</sup> of waste water;
  - 8:00-9:00pm  $1 \pm 10\%$  m<sup>3</sup> of waste water.
- 3.1.3 The MWWTP must be capable of handling grey and black water from ablutions, laundry and kitchen facilities with the following characteristics:
- BOD<sub>5</sub> - 450 mg/l;
  - Total Suspended Solids - 400 mg/l;
  - Total phosphorous - 6-12 mg/l;
  - Ammonia (NH<sub>3</sub>-N) - 20-50 mg/l;
  - pH - 6-8;
  - Temperature – minimum 15 degree Celsius;
  - Oil and Grease - 10 mg/l; and
  - Fecal Coliform Bacteria - 2 - 30 x 10<sup>6</sup> Colony-Forming Units /100ml.
- 3.1.3.1 If the temperature of the waste water to be brought to the MWWTP is below 15 degree Celsius the operator on site will rise the temperature of the influent to minimum 15 degree Celsius.
- 3.1.4 The MWWTP must meet as a minimum the performance requirements for effluent quality set by Wastewater Systems Effluent Regulations (SOR/2012-139).
- 3.1.5 The deployed MWWTP must be able to have fully mature biomass using dry bacteria in no more than twenty one (21) calendar days.
- 3.1.6 The MWWTP must be provided with means in order to prevent insects to get into the system during transportation, storage, and operation.
- 3.1.7 The components of the MWWTP must have an IP55 rating unless otherwise specified in this document.

3.1.8 The MWWTP must be equipped with indication devices to provide the operator with information / signal(s) on normal and abnormal operating conditions.

3.1.9 The MWWTP must be considered a complete system. It must be tested from a system perspective and not as a group of components.

### 3.2 System Description

3.2.1 The MWWTP must be portable, structurally self-supporting above ground.

3.2.1.1 The MWWTP must operate on level ground and when it is angled maximum 2 degree in any direction from the true horizontal.

3.2.2 The MWWTP must include but not be limited to:

- a) One (1) ISO container, see paragraph 3.3;
- b) Waste water treatment system, see paragraph 3.4;
- c) Electrical system, see paragraph 3.5;
- d) Control system, see paragraph 3.6, and
- e) Plumbing system, see paragraph 3.7.

The components from b) to e) must be housed in the ISO container.

### 3.3 ISO Container

3.3.1 The MWWTP must be integrated into the twenty (20) foot container.

3.3.1.1 The MWWTP container in final configuration must be certified and comply with the requirements of the "International Convention for the Safe Containers" (CSC).

3.3.1.2 The container must be nine (9)-high stackable.

3.3.2 The MWWTP container must be ISO Type 1CC (20 ft / 6058 mm length x 8 ft / 2438 mm width x 8.5 ft / 2591 mm height) in travel configuration with ISO interlock corner castings.

3.3.3 The maximum gross weight of the container must not exceed 16,500 kg.

3.3.3.1 The gross weight of the container must be demonstrated during the First Article Test (FAT) as per paragraph 4.6.3.

3.3.4 The MWWTP container must be new or one trip, non-collapsible, and of a permanent character.

- 3.3.5 The structural members of the container must be made of Weathering Steel (i.e. CORTEN steel type).
- 3.3.6 The container must be in accordance with the standards ISO 668, ISO 1161, and ISO 1496-1.
  - 3.3.6.1 In the final configuration (ready for shipping) the MWWTP container must pass successfully the waterproofness test as per ISO 1496-1 paragraph 6.14.
    - 3.3.6.1.1 The waterproofness test must be part of the First Article Test (FAT) as per paragraph 4.7.3.
  - 3.3.6.2 The MWWTP must be provided with means to prevent the rain water to get into the container during operations.
  - 3.3.6.3 The MWWTP must be provided with means to prevent spills of the contaminated water into environment during operations, maintenance, and cleaning.
- 3.3.7 The interior walls, ceilings, and floors of the container must be waterproofed and made of aluminum or stainless steel.
- 3.3.8 All components of the MWWTP must be distributed throughout the container to ensure that the center of gravity is kept as central and as low as possible.
- 3.3.9 The container must be provided with separate recesses for water inlet, outlet, drainage connectors, and electrical connectors.
  - 3.3.9.1 The recesses must be separated by sealed walls from the inside of the container.
  - 3.3.9.2 The recesses must be provided with hinged panels.
- 3.3.10 Fork-lift pockets must be provided for the handling of the container in loaded conditions in accordance with paragraph 5.8.1 of ISO 1496-1.
  - 3.3.10.1 Fork-lift pockets for the handling of the container in unloaded conditions must not be provided.
- 3.3.11 Attachments / outside components of the system in shipping configuration must fit totally within the external dimensional envelope of the container.
  - 3.3.11.1 Only if it is necessary for the purpose of operation, some components of the system may protrude outside the external dimensional envelope of the container. For transportation purposes, they must be removable or retractable.

- 3.3.12 The container in final configuration must comply with “The Customs Convention on the International Transport of Goods under the cover of T.I.R. Carnets” or “The Customs Convention on Containers”.
  - 3.3.12.1 All access panels of the container must be lockable, watertight, and be furnished with hold open devices and T.I.R. securing gadgets (e.g. provisions for padlocking and custom sealing, locking mechanisms, etc).
  - 3.3.12.2 Hinge-pins and screws, bolts, and other fasteners used for securing the doors, access panels, hinges, closing devices, must be welded or otherwise secured in such a manner as to prevent access to the interior of the container without leaving visible signs of tampering.
  - 3.3.12.3 The T.I.R. certification is not required.
- 3.3.13 The container must be equipped with watertight lockable doors.
  - 3.3.13.1 The doors must be made of Weathering Steel (i.e. CORTEN steel type).
  - 3.3.13.2 Each door must have the door gasket to be made of an extruded J-type ethylene propylene diene monomer (EPDM) rubber is installed to the door peripheral frames with galvanized steel gasket retainers which must be caulked with butyl sealant before installation of gasket, and fastened by electro-galvanized self-tapping screws at a pitch of 150 mm.
  - 3.3.13.3 All locking device handles must be furnished with provisions for padlocking and custom sealing.
  - 3.3.13.4 The doors must include a device in order to keep the doors in open position.
  - 3.3.13.5 Any personnel door must be equipped with an inside handle.
- 3.3.14 The container must have non-skid flooring in shoe-traffic areas.
- 3.3.15 All access panels, covers, closing devices, connector caps must be permanently attached / secured to the MWWTP container.
  - 3.3.15.1 Access panels and covers must be provided with means to be kept in open position.
- 3.3.16 All loose components / spare parts / consumables / power cables / hoses / grounding spikes and cables of the MWWTP under the provisions of this SOW must be contained / secured in accessible storage cabinet(s) / fixtures designed to protect them from damage during operation,



transportation and storage. Shocks from tilt and drop shock tests as per Appendix 1 to Annex A must not remove them from their cabinets / fixtures.

- 3.3.16.1 The storage cabinets must be permanently secured to the MWWTP container.
- 3.3.16.2 The storage cabinets must be provided with handles, locking bars, and no keys.
- 3.3.17 The MWWTP must be provided with one (1) permanently attached document holder.
  - 3.3.17.1 The holder must be installed inside of the container in an accessible dry place.
  - 3.3.17.2 The holder must accommodate the Technical Manual and the Training Course Documentation as set forth in the paragraphs 4.1 and 4.5.1 at the same time.
- 3.3.18 The container must be fully insulated.
- 3.3.19 The structure of the container must be designed to allow the loading of the MWWTP on trucks using the load handling system with rollers to guide the base structure of the container.
- 3.4 Waste Water Treatment System (WWTS)
  - 3.4.1 The WWTS must be capable of handling influent grey and black water as set forth in the paragraph 3.1.
  - 3.4.2 The WWTS must have a pre-treatment process.
    - 3.4.2.1 The pre-treatment process must include the pre-screening and grit removal phases.
      - 3.4.2.1.1 Pre-screening must be capable of removing items such as plastic bags, personal hygiene items, and other domestic items which do not break down during normal biological treatment.
      - 3.4.2.1.2 The pre-treatment must be capable of removing the bulky solids and grits to the level that will not clog the WWTS.
      - 3.4.2.1.3 The grits and solids must be accumulated in an easily accessible containment provided with a removable bag.
        - 3.4.2.1.3.1 The type of the bag must be closed in order for the screenings to remain encapsulated.

- 3.4.3 The WWTS must have an ozone system for disinfection of the effluent.
- 3.4.4 The WWTS must include sludge dewatering or similar technology in its design and overall concept.
  - 3.4.4.1 The sludge must be dewatered to dry solids content of 15% or greater.
  - 3.4.4.2 The sludge must be landfill disposable.
  - 3.4.4.3 The sludge must be collected in an easily accessible containment provided with a removable bag.
    - 3.4.4.3.1 The type of the bag must be closed in order for the sludge to remain encapsulated.
- 3.4.5 The removal of the grits, solids and sludge must be part of the daily operation and inspection tasks of the MWWTP as per paragraph 3.8.3.1.1.
- 3.5 Electrical System
  - 3.5.1 All electrical equipment of the electrical system must be certified in accordance with the Canadian Electrical Code CSA C22.1 and C22.2.
  - 3.5.2 The MWWTP electrical system must be capable to operate on 120/208V 3-phase 60Hz using an external power source.
  - 3.5.3 The electrical system must include inlets to connect the MWWTP to the external power source.
    - 3.5.3.1 If the MWWTP requires more than 100A, the electrical system must include four (4) single pole cable inlets minimum NEMA 4 / NEMA 3R rated.
      - 3.5.3.1.1 The inlets must be cam-lok E1016 "J" power series, #2-4/O cable.
      - 3.5.3.1.2 The type of the inlets must be male panel-mount.
      - 3.5.3.1.3 The colors of the inlets must be black, red, white, and blue as per Canadian Electrical Code.
      - 3.5.3.1.4 Protective covers with lanyards must protect the inlets. The color of the covers must match the color of the inlets.
    - 3.5.3.2 If the MWWTP requires less than 100A, the electrical system must include one (1) male inlet.

- 3.5.3.2.1 The inlet must be HUBBELL, 4P5W (4 poles, 5 wires), IP 67 rated.
- 3.5.3.2.2 The inlet must be equipped with a permanently attached HUBBEL closure cap.
- 3.5.3.3 The power inlet must be installed in the container recess.
- 3.5.3.4 Weatherproof label must be permanently attached near the inlet in order to indicate the type, the voltage and the amperage.
- 3.5.4 The electrical system must include one (1) main power cable in order to connect the MWWTP to the power network.
  - 3.5.4.1 If the MWWTP requires more than 100A, the cable system must contain:
    - 3.5.4.1.1 Flexible weatherproof cords type W, nominal length 75 ft. / 22.9 meters, four (4) conductors.
    - 3.5.4.1.2 Four (4) cam-lok E1016 "J" power series, #2-4/O cable, single pole cable male connectors. The type of the connectors must be "cable ends". Their color must be: black, red, white, and blue as per Canadian Electrical Code.
    - 3.5.4.1.3 Four (4) cam-lok E1016 "J" power series, #2-4/O cable, single pole cable female connectors. The type of the connectors must be "cable ends". Their color must be: black, red, white, and blue as per Canadian Electrical Code.
    - 3.5.4.1.4 Protective covers with lanyards must protect the connectors. The color of the covers must match the color of the connectors.
    - 3.5.4.1.5 The connectors must be NEMA 4 / NEMA 3R rated.
  - 3.5.4.2 If the MWWTP requires less than 100 A, the cable system must contain:
    - 3.5.4.2.1 One (1) flexible weatherproof cord type SOOW or W, nominal length 75 ft. / 22.9 meters, with five (5) conductors.
    - 3.5.4.2.2 One (1) HUBBELL female connector 4P5W (4 pole, 5 wire) IP 67 equipped with a permanently attached Hubbell closure cap.
    - 3.5.4.2.3 One (1) HUBBELL male plug 4P5W (4 pole, 5 wire) IP 67 equipped with a permanently attached Hubbell closure cap.
  - 3.5.4.3 The main power cable must be secured as per the paragraph 3.3.16.

- 3.5.5 Power input must be routed through a power distribution panel with circuit breakers.
  - 3.5.5.1 The electrical distribution panel system must be equipped with an automatic phase monitoring system for all three (3) phases.
- 3.5.6 Electrical circuits must be provided with automatic Ground Fault Circuit Interrupters where applicable.
- 3.5.7 A master disconnect switch must be provided to turn off all power within the system.
  - 3.5.7.1 Sign must clearly identify the master / main disconnect switch.
- 3.5.8 The MWWTP must be provided with emergency stop button.
- 3.5.9 The electrical system of the MWWTP must include as a minimum 2 duplex 110 V, 15 A outlets installed inside of the container for power tools.
  - 3.5.9.1 The outlets must be waterproof and have spring-loaded covers.
- 3.5.10 All branch electrical circuits and wiring must be installed using protected and/or covered means suitable for the MWWTP indoor environment.
- 3.5.11 The MWWTP container must be provided with grounding equipment in accordance with Canadian Electric Code.
  - 3.5.11.1 The grounding system of the container must include a ground spike and an exterior grounding cable.
  - 3.5.11.2 The MWWTP container must be equipped with grounding stud.
  - 3.5.11.3 The grounding spike and the exterior grounding cable must be secured as per the paragraph 3.3.16.
- 3.5.12 The electrical system must be equipped with an Emergency Alarm System.
  - 3.5.12.1 The system must include two (2) red strobe lights located inside and outside of the container.
    - 3.5.12.1.1 One (1) strobe light visible 360°, minimum 4,000 candela luminous intensity must be mounted at least one (1) meter above the height of the container.
    - 3.5.12.1.2 The other light must be installed inside of the MWWTP container.

3.5.13 The MWWTP must have a lighting package consisting of LED lighting fixtures.

3.5.13.1 The lighting package must provide at least 50 foot-candles / 540 lux illumination.

3.5.14 The MWWTP must have a ventilation system.

3.5.14.1 The MWWTP must have an air inlet and an interior-mounted fan.

3.5.14.2 The MWWTP must also have an air outlet and an interior-mounted exhaust fan.

3.5.14.3 The ventilation system must be provided with means to prevent the rain water to get into the containers during operation and to pass the test as per paragraph 3.3.6.1.

3.5.14.4 Each fan must be operated by an individual variable speed switch.

3.5.15 The electrical system must include a receptacle for the effluent heated hose as per paragraph 3.7.9.1.

3.5.15.1 The receptacle must be installed in a container recess.

3.5.15.2 The receptacle must be weatherproof and provide with a permanently attached closure cup.

3.5.16 The MWWTP must be provided with means to provide climate controlled conditions / temperature for operators / maintainers for winter conditions.

### 3.6 Control System

3.6.1 The MWWTP must include a control system.

3.6.2 The control system must be in English / French and in metric or metric/imperial units.

3.6.3 The control system must be capable of constantly monitoring the flow from inlet to outlet.

### 3.7 Plumbing System

3.7.1 The MWWTP must include a plumbing system.

3.7.2 The plumbing system must be designed and constructed in accordance with the most recent version of Standard ASME B31.3 Pressure Piping - Process Piping.

- 3.7.3 The MWWTP must be capable of utilizing sewage from external pressurized (sewage truck) and unpressurized sources (onion tank).
  - 3.7.3.1 The sewage intake must be mounted in a recessed opening in the container wall.
  - 3.7.3.2 The coupler for connecting the MWWTP to the outside sewage source must be 4" diameter male Cam Lock fitting with a secured protective cap.
  - 3.7.3.3 The MWWTP must be equipped with one 2" diameter influent hose with nominal length 25-ft / 7.6 meters.
    - 3.7.3.3.1 The influent hose must have 2" diameter female Cam Lock and 2" diameter male Cam Lock fittings on the ends with secured protective caps.
- 3.7.4 The MWWTP must be equipped with an influent pump.
  - 3.7.4.1 The influent pump must be capable of being by-passed.
- 3.7.5 The MWWTP must have sampling ports/valves for ease of testing.
  - 3.7.5.1 The ports / valves must allow the sampling at least at influent, effluent, before the ozone system, and at dewatering system points.
- 3.7.6 The MWWTP must be capable of being cleaned in details in order to remove potential contaminants (soil, seeds, organic waste etc) before being returned to Canada. All components of the MWWTP (including the tanks) must be able to be pressure washed and drained.
  - 3.7.6.1 Drainage / cleaning ports must be available for detailed cleaning using a vacuum truck and a pressure washer (not part of the MWWTP).
  - 3.7.6.2 All components of the MWWTP must have easy access for cleaning and preparation for transportation and storage.
  - 3.7.6.3 The inside of the plumbing system (MWWTP tanks, strainers, dewatering system, pipes, etc.) must be possible to be cleaned and drained.
    - 3.7.6.3.1 The plumbing system must be provided with fittings in order to allow the drainage.
  - 3.7.6.4 The area inside of the container, but outside the plumbing system, must be possible to be cleaned using a pressure washer.

- 3.7.6.4.1 The flooring of the container must contain a sump with fittings in order to allow the drainage.
- 3.7.6.5 The fittings must be 2" male Cam Lock with secured protective caps.
- 3.7.6.6 The fittings must be located on the outside container wall(s).
- 3.7.7 The MWWTP must be equipped with one 2" diameter male Cam Lock fitting with a secured protective cap for external plumbing connectivity for the effluent.
- 3.7.8 The MWWTP must be supplied with one 3" diameter male to 4" diameter female Cam Lock reducer and one 2" diameter female to 4" diameter female Cam lock reducer in the storage cabinets as set forth in the paragraph 3.3.16.
- 3.7.9 The MWWTP must be equipped with the following hoses for the effluent:
  - 3.7.9.1 One (1) electrically heated hose with a nominal length of 25-ft / 7.63 meters;
  - 3.7.9.2 Two (2) non-heated hoses with the nominal length of 25-ft / 7.63 meters each.
  - 3.7.9.3 All hoses must be equipped with male and female Cam Lock ends and permanently attached caps and be compatible with the MWWTP system and must be capable of being connected to each other creating a 75 ft / 22.9m effluent hose system.
  - 3.7.9.4 During winter time the heated hose must be the first hose attached to the MWWTP and be capable of being linked to the electrical system through an IP 67 plug with permanently attached closure caps.
  - 3.7.9.5 The heating of the heated hose must be automatically controlled in order to prevent the freezing of the effluent.
  - 3.7.9.6 During the winter time the heated hose will be fully exposed to weather elements. The other two (2) non-heated hoses will be protected by the users of the MWWTP on site in order to prevent the freezing of the effluent.
- 3.7.10 The influent hose and effluent hoses must be secured as per paragraph 3.3.16.
- 3.7.11 The fittings for the influent, effluent and drainage must be provided in the recesses of the wall(s) of the container.

3.7.12 All fittings and caps must be constructed of aluminum / stainless steel material.

3.7.13 All components, connectors and water flow directions of the plumbing system must be clearly labeled with English and French signs.

### 3.8 Performance Characteristics

#### 3.8.1 Operating Conditions

3.8.1.1 The MWWTP must be capable of operation, without malfunction, in all climatic conditions with the ambient temperature from -46°C / -51°F through +50°C / +122°F inclusive.

#### 3.8.2 Transportability

3.8.2.1 The MWWTP ISO container must be approved to CSC standard meeting the requirements of ISO-668, ISO-1496-1 and ISO-1161 for Type 1CC shipping containers for land, air, and sea transportation.

3.8.2.2 The container is subject to off road movement by the military sea containers handling units for containers handling.

3.8.2.2.1 The packaging / fixtures must be robust and durable to be re-used throughout the life of the equipment, use space efficiently, facilitate the identification of all components during storage, and ensure the security of the components during transportation.

#### 3.8.3 Operability, Maintainability and Inspection

3.8.3.1 The MWWTP must be designed and constructed for ease of operation, maintenance and inspection.

3.8.3.1.1 It must be possible for one trained personnel to perform all routine operation and inspection tasks that are required during a deployment within a period not exceeding sixty (60) minutes per day.

3.8.3.2 The system must have access points to verify the condition of all components.

3.8.3.3 Any specific tool rather than usual tools necessary to perform the operation / maintenance of the MWWTP must be provided with the system.

#### 3.8.4 Reliability



3.8.4.1 The MWWTP must be designed with 100% redundancy in its operation, to include pumps and other key/critical operational components.

3.8.4.1.1 In case of failure, the system must be capable of automatically switching the backup components and be operational with no user intervention.

### 3.8.5 Storage Temperature

3.8.5.1 The MWWTP must be capable of being stored outdoors, without deterioration, at ambient temperatures between  $-46^{\circ}\text{C}$  /  $-51^{\circ}\text{F}$  and  $+50^{\circ}\text{C}$  /  $+122^{\circ}\text{F}$ .

### 3.8.6 Preservation and Winterization

3.8.6.1 The MWWTP must be capable of being preserved and winterized for storage for periods exceeding one (1) year.

### 3.8.7 Snow and Ice

3.8.7.1 The equipment must remain operational and safe under a snow load accumulation producing 240 kg/m<sup>2</sup>.

3.8.7.2 Ice accumulation must not damage or prevent the equipment from functioning.

3.8.7.3 The equipment must not permit water accumulation in pockets, creases, fissures or depressions that could cause structural damage upon freezing.

## 3.9 Health and Safety

3.9.1 The MWWTP must comply with Canadian Centre for Occupation Health and Safety regulations for such equipment in effect and applicable by law in Canada on the date of manufacture.

3.9.2 The MWWTP must have danger and caution signs, labels and markings on it for warning of specific hazards such as voltage, current, thermal or physical hazards in accordance with Canadian Centre for Occupation Health and Safety regulations.

3.9.2.1 All signs, labels and markings must be provided in English and French.

3.9.3 The MWWTP must have an eyewash bottle in an unobstructed and readily accessible location inside of the container.

- 3.9.4 The MWWTP must have an installed fire extinguisher wall mounting bracket NSN 4210-21-886-3387 and an installed fire extinguisher NSN 4210-21-908-1048 in an unobstructed and readily accessible location inside of the container.
- 3.9.5 The MWWTP must have an installed bracket for a First Aid Kit in an unobstructed and readily accessible location inside of the container.
  - 3.9.5.1 The first aid kit NSN 4545-21-111-8439 will be provided by Canada to be installed in the system.
- 3.10 Construction
  - 3.10.1 Materials and Parts
    - 3.10.1.1 The MWWTP must be made using new materials and components only.
  - 3.10.2 The MWWTP must be constructed as per industry standards.
  - 3.10.3 The MWWTP must accommodate personnel within the stature range from 60.9-in (1547 mm) to 73.3-in (1862 mm).
  - 3.10.4 Protection Against Corrosion and Chemical Agents
    - 3.10.4.1 The MWWTP must be constructed of materials resistant to or life term protected against corrosion and deterioration caused by atmospheric conditions, corrosive agents, ground moisture, and salt.
      - 3.10.4.1.1 All tanks of the MWWTP must be made of stainless steel.
    - 3.10.4.2 The MWWTP exterior color must be green #34094 in accordance with FED-STD-595C including the handles and fasteners.
    - 3.10.4.3 Coatings must level out to an adherent, continuous and uniform film without runs, wrinkles, streaks, or areas of no film.
    - 3.10.4.4 Any coating damaged during assembly or examination must be touched up. There must be no areas where rust can accrue.
    - 3.10.4.5 Finish must be free of blistering, peeling and chips.
    - 3.10.4.6 The undercarriage area of the container must include a coating providing corrosion, long term road abrasion protection, and protection against rock impact.
- 3.11 Identification and Marking

3.11.1 An identification plate made of metal must be attached to the MWWTP container in accordance with D-02-002-001/SG-001.

3.11.1.1 The identification plate must contain NATO Stock Number (NSN).

3.11.2 ISO Container Identification must be in accordance with ISO 6346.

3.11.2.1 A Canadian Forces Containerized Unit (CFCU) identification number must be stenciled to the MWWTP container in accordance with D-LM-008-002/SF-001.

3.11.3 CFCU number and NSN will be assigned by DND and provided to the Contractor.

### 3.12 Certification

3.12.1 The container of the MWWTP must be Convention for Safe Containers (CSC) certified as per International Association of Classification Societies standards.

3.12.1.1 The MWWTP container must be affixed with CSC plate.

3.12.2 The MWWTP must be certified in accordance with the Canadian Electrical Code CSA C22.1 and C22.2.

3.12.2.1 The MWWTP must be affixed with CSA certification tag.

3.12.3 Copies of the CSC and CSA certification documents must be available during the FAT as set forth in the paragraph 4.7.3.

## 4.0 INTEGRATED LOGISTICS SUPPORT (ILS)

### 4.1 Technical Manual

4.1.1 The Contractor must provide a technical manual including:

- General information about the MWWTP;
- Technical specification;
- Detailed instructions for set-up and tear-down;
- Operation and maintenance instructions covering the whole life of the MWWTP;
- Preparation for transportation and storage including maintenance during the storage (if any) and preparation for preservation and winterization;
- Loose components check list;

- Water Schematic diagram;
- Electrical Schematic diagram;
- List of the spare parts and consumables for one (1) month of operation, and
- Complete set of OEM literature for the MWWTP.

4.1.2 The technical manual must be provided in English and French.

4.1.3 A draft technical manual in electronic Microsoft Word format must be delivered to the TA for review in five (5) business days prior to the FAT as set forth in the paragraph 4.6.3.

4.1.3.1 The TA will provide to the Contractor comments within five (5) business days following the receipt of the draft.

4.1.4 The final hard copy and soft copy on the USB memory stick of the TA approved technical manual must be provided for each MWWTP and to the TA.

4.1.5 Hard copy of the draft manual may accompany the MWWTP delivery until the final approved manual is printed.

#### 4.2 Recommended Spare Parts List

4.2.1 The Contractor must identify and submit a list itemizing their recommended spare parts and consumables for the MWWTP.

4.2.2 The List of the Spare Parts and Consumables must include the following information related to each listed part / consumable:

- a) Item name;
- b) Manufacturer name (not reseller);
- c) Manufacturer's part number;
- d) Quantity per assembly;
- e) Standard unit price;
- f) Unit of issue;
- g) Shelf life;
- h) Illustrations / basic engineering drawing, and
- i) Recommended buy quantity needed for one (1) year of operation.

4.2.3 The Contractor must deliver the spare parts and consumables for a one (1) month operation with the MWWTP.

- 4.2.3.1 The spare parts and consumables must be delivered in appropriate package and secured in the storage cabinet(s) / fixture(s) as set forth in the paragraph 3.3.16.

#### 4.3 Top Level Drawing

- 4.3.1 The Contractor must provide a draft top level drawing of the MWWTP to the TA within twenty (20) business days following the project start-up meeting as set forth in the paragraph 4.6.2.
- 4.3.2 The TA will provide to the Contractor comments within five (5) business days following the receipt of the draft top level drawing.
- 4.3.3 Final soft copy of the top level drawing must be provided within five (5) business days after the completion of the FAT.

#### 4.4 Environmental Assessment

- 4.4.1 The MWWTP equipment environmental assessment is an optional deliverable.
- 4.4.2 If this option is exercised, the Contractor must provide the MWWTP environmental assessment in accordance with Appendix 2.
- 4.4.3 The environmental assessment must be provided in English and French.
- 4.4.4 A draft environmental assessment in electronic Microsoft Word format must be delivered to the TA for review within thirty (30) business days after the option is exercised.
  - 4.4.4.1 The TA will provide to the Contractor comments within twenty (20) business days following the receipt of the draft.
- 4.4.5 The final soft copy on the USB memory stick of the Environmental Assessment must be provided to the TA.

#### 4.5 Training

##### 4.5.1 Training Course Documentation

- 4.5.1.1 The Contractor must provide training course documentation in French and English.
- 4.5.1.2 The training course documentation in contractor's format must include all training course documentation such as:
  - a. Instructor notes,
  - b. Lesson plan,

- c. Slides in the form of a Power Point Presentation,
- d. Student guide, and
- e. Training material.

4.5.1.3 The draft training course documentation in electronic Microsoft Word format must be delivered to the TA for review and approval within twenty (20) business days prior to the FAT as set forth in the paragraph 4.7.3.

4.5.1.3.1 The TA will provide to the Contractor comments within ten (10) business days following the receipt of the draft.

4.5.1.4 The final hard copy and soft copy on the USB memory stick of the TA approved training course documentation must be provided for each MWWTP and to the TA.

4.5.1.5 Hard copy of the draft training course documentation may accompany the MWWTP delivery until the final approved documentation is printed.

#### 4.5.2 Training Course

4.5.2.1 The training course is an optional deliverable.

4.5.2.2 If this option is exercised, the Contractor must provide one (1) comprehensive "Train the Trainer" course for a total of five (5) operators and five (5) maintenance personnel.

4.5.2.3 The training course must be conducted in English.

4.5.2.4 Transportation and lodging costs for DND personnel will be borne by DND.

4.5.2.5 The Contractor must supply to each student in a binder a hard copy of the course and one (1) electronic copy of the course on a USB memory stick, which must include all training course documentation such as:

- a) Instructor notes,
- b) Lesson plan,
- c) Slides in the form of a Power Point Presentation,
- d) Student guide, and
- e) Training material.

#### 4.5.3 Training Plan

- 4.5.3.1 The training plan is an optional deliverable.
- 4.5.3.2 If this option is exercised, the training plan must include:
  - a) The duration of the course, not to exceed five (5) business days.
  - b) Overview of the course content (teaching points and estimated time devoted to each) required so that each student must attain the level of competency necessary to conduct the training of other students.
  - c) Description of the contractor's method of student assessment.
  - d) Requirements for classroom and other training equipment and facilities.
  - e) The training plan must be provided in Contractor's format.
- 4.5.3.3 The Contractor must provide a draft training plan in electronic Microsoft Word format to the TA for review and approval within twenty (20) business days prior to the training course as set forth in the paragraph 4.5.2.
  - 4.5.3.3.1 The TA will provide comments to the Contractor within ten (10) business days following the receipt of the draft training plan.
- 4.5.3.4 The training must not commence until notification is received from the TA that the training plan has been approved.

#### 4.6 Project Management

##### 4.6.1 Project Manager

- 4.6.1.1 The Contractor must appoint a Project Manager with the responsibility and authority to plan, organize, direct, coordinate, execute, monitor, control, communicate, report and manage risks for all work required under the contract.
- 4.6.1.2 The Contractor's Project Manager must be the primary point-of-contact between the TA and the Contractor for all technical matters.

##### 4.6.2 Project Start-up Meeting

- 4.6.2.1 The Contractor must within ten (10) business days following the contract award arrange a project start-up meeting with the DND to discuss the contractual, procedural and technical issues along with the general approach to Project completion.

4.6.2.2 The Contractor must prepare and submit the project start-up meeting minutes to the TA no later than five (5) business days after the meeting.

4.6.3 Progress Review Meetings

4.6.3.1 Progress review meetings must be held for detailed review of the project performance.

4.6.3.1.1 Progress review meetings must be established by mutual agreement between the contractor and the TA.

4.6.3.2 The Contractor must prepare and submit the progress review meeting minutes to the TA no later than five (5) business days after a meeting.

4.7 First Article

4.7.1 First Article Fabrication

4.7.1.1 The Contractor must produce one (1) first article as test specimen.

4.7.1.2 The first article must consist of a MWWTP as specified in this SOW.

4.7.1.3 The first article must be manufactured using the established procedures, processes, personnel, materials, and facilities of a full production unit.

4.7.1.4 The Contractor must proceed with the fabrication of the first article following the acceptance of the data / drawings by the TA.

4.7.1.4.1 The data from the First Article Test Plan as set forth in the paragraph 4.7.2 showing requirement compliance by analysis / calculations must be approved by the TA prior to design freezing and manufacturing of the MWWTP.

4.7.2 First Article Test Plan (FATP)

4.7.2.1 The Contractor must produce one (1) FATP.

4.7.2.2 The Contractor must provide the proposed FATP to the TA.

4.7.2.2.1 The Appendix 3 to this SOW provides a template / example.

4.7.2.3 The plan must cover the requirements of this SOW.

4.7.2.3.1 The FATP must present how the herein requirements will be evaluated: by inspection, testing or certification (statements, analysis / calculations, documentation).



- 4.7.2.4 The FATP must include the tilt, drop shock and leak detection, and functionality tests in accordance with Appendix 1 of this SOW.
- 4.7.2.5 The draft FATP must be forwarded to the TA within thirty (30) business days after the start-up meeting.
  - 4.7.2.5.1 The TA will provide comments to the Contractor within ten (10) business days following the receipt of the draft FATP.
- 4.7.2.6 The FAT must not commence until notification is received from the TA that the FATP has been approved.
- 4.7.3 First Article Test (FAT)
  - 4.7.3.1 The Contractor must subject the first article to all requirements in accordance with the approved FATP.
  - 4.7.3.2 The TA will witness the FAT.
- 4.7.4 First Article Test Report
  - 4.7.4.1 The first article test data must be forwarded to the TA for approval in the form of a First Article Test (FAT) Report within five (5) business days of the completion of the FAT.
  - 4.7.4.2 The FAT Report must be presented as a single document showing the cross-reference of the FATP and the supporting documentation from the FAT (e.g.: inspection check lists, testing results, certification documents).
  - 4.7.4.3 Canada will provide to the contractor, a formal notice of approval or rejection of the FAT report within five (5) business days of receipt of the report.
- 4.7.5 FAT Rejection
  - 4.7.5.1 If the FAT is rejected, the Contractor must resolve deficiencies with the equipment and, if requested by the TA, repeat any or all first article test plan requirements as expeditiously possible.
  - 4.7.5.2 All costs related to these activities must be borne by the Contractor.
- 4.7.6 Finalization of the first article
  - 4.7.6.1 The first article must be considered finalized when it is in the accepted configuration following the completion and acceptance of the FAT, including any changes to equipment because of the FAT rejection.

#### 4.7.7 Delivery of Test Article

- 4.7.7.1 The Contractor must deliver the tested article as deliverable equipment only when the article meets all contract requirements for acceptance.

### 5.0 CONTRACT DELIVERABLES

#### 5.1 General

- 5.1.1 The Contractor must ensure that the MWWTP is delivered correctly adjusted, lubricated, and serviced such that the plant is ready for operation / transportation.

#### 5.2 Acquisition Deliverables

CLIN	Item Description	Qty
1	Mobile Waste Water Treatment Plant	2
2	Technical Manual (para 4.1)	1 soft copy and 1 hard copy for TA and each MWWTP
3	Top Level Drawing (para 4.3)	1 soft copy for TA
4	Training Course Documentation (para 4.5.1)	1 soft copy and 1 hard copy for TA and each MWWTP
5	First Article Test Report (para 4.7.4)	1 soft copy for TA
6	Recommended Spare Parts List (para 4.2)	1 soft copy for TA

#### 5.3 Optional Deliverables

OLIN	Item Description	Qty
1	Mobile Waste Water Treatment Plant	2
2	Technical Manual (para 4.1)	1 soft copy and 1 hard copy for each MWWTP
3	Environmental Assessment (para 4.4)	1 soft copy for TA
4	Training Course Documentation (para 4.5.1)	1 soft copy and 1 hard copy for each MWWTP
5	Training Course (para 4.5.2)	1

## **Contract Deliverables Pricing List**

**Mobile Wastewater Treatment Plant**  
Requisition Number: W8476-155286

Prepared by:  
DLP 5-5-2-1  
National Defence Headquarters  
Major General George R. Pearkes Building  
Ottawa, Ontario  
K1A 0K2

## Annex B - Contract Deliverables Pricing List

Acquisition Deliverables									
CLIN	Deliverables	Instructions	Destination	Quality Assurance Code	Basis Of Payment	Unit of Issue	Firm Unit Price	Quantity	Extended Price
1	Mobile Waste Water Treatment Plant	As per Annex "A"	Laval	Q	BOP #1	EA	\$_____	2	\$_____
2	Technical Manual	As per Annex "A" article 4.1	NDHQ TA/Laval	C	BOP # 1	EA	\$_____	3	\$_____
3	Top Level Drawing	As per Annex "A" article 4.3	NDHQ TA	C	BOP # 1	EA	\$_____	1	\$_____
4	Training Course Documentation	As per Annex "A" article 4.5.1	NDHQ TA/Laval	C	BOP # 1	EA	\$_____	3	\$_____
5	First Article Test Report	As per Annex "A" article 4.7.4	NDHQ TA	C	BOP # 1	EA	\$_____	1	\$_____
6	Recommended Spare Parts List	As per Annex "A" article 4.2	NDHQ TA	C	BOP # 1	EA	\$_____	1	\$_____
Sub-Total Table 1									
									Tax
Total (GST/OSTi)									

Optional Deliverables									
OLIN	Costed Options	Instructions	Delivery	Quality Assurance Code	Basis of Payment	Unit of Issue	Firm Unit Price	Quantity	Extended Price
1	Mobile Waste Water Treatment Plant	As per Annex "A"	Laval	Q	BOP # 1	EA	\$_____	2	\$_____
2	Technical Manual	As per Annex "A" article 4.1	Laval	Q	BOP # 1	EA	\$_____	2	\$_____
3	Enviromental Assesment	As per Annex "A" article 4.4	NDHQ TA	C	BOP # 1	EA	\$_____	1	\$_____
4	Training Course Documentation	As per Annex "A" article 4.5.1	Laval	Q	BOP # 1	EA	\$_____	2	\$_____
5	Training Course	As per Annex "A" article 4.5.2	Contractor's Facility	C	BOP # 1	EA	\$_____	1	\$_____
Sub-Total Table 2									
Sub-Total Tables 1 & 2									
Tax Tables 1 & 2									
Total (GST/QSTi)									

TECHNICAL BID EVALUATION  
FOR  
MOBILE WASTE WATER TREATMENT PLANT

## 1. INTRODUCTION

### 1.1 Scope

This document outlines a plan for bid evaluation. It identifies the technical criteria to be evaluated. Evaluation will be based on mandatory criteria.

### 1.2 General Form of Proposals

Proposals must address in clearly organized, narrative form all subjects identified in this bid evaluation plan.

### 1.3 Evaluation

Bid proposals will be evaluated on the basis of mandatory criteria. To be considered responsive, a bid must satisfy **all** mandatory criteria.

## 2. MANDATORY CRITERIA

Responses to the mandatory requirements set forth in this section will be evaluated on a simple, stringent pass/fail basis. Proposals not meeting each and every one of the mandatory requirements identified in the tables below will be considered non-compliant and given no further consideration.

### 2.1 Mandatory Requirements

#### 2.1.1 The bidder must:

Description of Requirement	Cross-reference to bid documents (page / paragraph)
a) Submit a full Technical Proposal showing the company has an understanding of the requirement and demonstrating the approach they would take to produce the required MWWTP. This must include, but not necessarily be limited to, the requirements specified in Section 3.2.2 of the Statement of Work, namely, the ISO Containers, the Waste Water Treatment System, the Electrical System, the Control system, and the Plumbing System.	
b) Demonstrate how the MWWTP will comply with the requirements from the paragraph 3.1.2 "The MWWTP must be capable of handling peak loads as per below duty cycle: <ul style="list-style-type: none"><li>6:00-8:00am 3±10% m<sup>3</sup> of waste water;</li><li>10:00-11:00am 2±10% m<sup>3</sup> of waste water;</li><li>2:00-3:00pm 2±10% m<sup>3</sup> of waste water;</li><li>6:00-8:00pm 4±10% m<sup>3</sup> of waste water;</li><li>8:00-9:00pm 1±10% m<sup>3</sup> of waste water."</li></ul>	

c)	Demonstrate a history of directly related experience in the design/manufacture of at least one (1) MWWTP with a minimum of 10 m <sup>3</sup> per day of waste water capacity integrated in one (1) CSC certified 20 foot ISO container in the last five (5) years from the date of bid closing. The year when the system was completed must be provided.	
d)	Provide client contact information to confirm the experience related to the point c).	
e)	Provide technical information supporting the system related to the point c).	
f)	Provide one (1) laboratory report or test results that demonstrate that the manufacturer is capable of meeting the effluent guidelines as described in Annex A. The report or test results must be from a test done to a contractor waste water treatment system of similar complexity to the system requested in Annex A. The test data shall come from a laboratory accredited by the Canadian Association of Laboratory Accreditation (CALA) or equivalent.	

**MOBILE WASTE WATER TREATMENT PLANT**  
**TILT, DROP SHOCK, LEAK DETECTION, AND FUNCTIONALITY TEST**  
**PROCEDURES**

**PART OF FIRST ARTICLE TEST PLAN**

**1.0 SCOPE**

1.1 **Purpose.** This document provides test requirements for the Mobile Waste Water Treatment Plant (MWWTP). The tests included herein are designed to verify that the internal fittings, packaging, and dunnage withstand off-road movement and military handling.

1.2 **Responsibility.** The Contractor is responsible for the performance of the tests as specified herein at its facility. The DND reserves the right to perform any of the actions set forth herein where such actions are deemed necessary to ensure the MWWTP conforms to prescribed requirements. The MWWTP must be submitted to and must pass all tests described below.

**2.0 TESTS**

2.1 **Test Specimen for tilt and drop shock tests described below.** For testing the MWWTP container must be loaded / configured for transport and storage in accordance with the Contractor's manual. The container must be placed on hard surface.

2.2 **Tilt Test.** The tilt test must verify if the MWWTP container and its load can resist multiple angles of elevation due to military handling.

2.2.1 **Description.** The tilt test must consist of lifting one end of the container to reach an angle of 45 degrees. This test must be repeated on the other end.

2.3 **Drop Shock Test.** After being tilt tested the MWWTP will be tested for shocks. The shock test must verify if the MWWTP container can withstand shocks due to off road movement and military handling.

2.3.1 **Description.** The drop shock test must consist of dropping the container on the ground when one end is lifted 15 centimeters off the ground. This test must be repeated on the other end.

2.4 **Acceptance Criteria in order to proceed with the leak detection and functionality tests.** The condition of the MWWTP must be suitable for use / transportation at the completion of the tilt and drop shock tests. The container will be



inspected visually inside and outside. Any secured item must not fall from its fixture. Any storage cabinet door must not open. Any damage / crack resulting from the tests must be cause for failure.

**2.5 Test Specimen for leak detection and functionality tests described below.** After being successfully tested for tilt and shocks the MWWTP will be prepare for use in accordance with the Contractor's manual; connected to power, to influent (water) / effluent, etc.

**2.6 Leak Detection and Functionality Tests.** The tests must verify if the MWWTP was not damaged during the tilt and shock tests.

**2.7 Description.** The complete system will be run and system components will be inspected. Leaks are not acceptable; they are considered damage. Any malfunction of the waste water treatment system, electrical system, control system, plumbing system must be cause for failure.

### **3.0 ACCEPTANCE**

**3.1 Acceptance Criteria.** The condition of the MWWTP must be suitable for use / transportation at the completion of the tilt, shock, leak detection, and functionality tests. Any damage resulting from the tests must be cause for failure.

<b>APPENDIX 2</b>					
<b>1. TITLE</b> <b>Equipment Environmental Assessment (EEA)</b>	<b>2. IDENTIFICATION NUMBER</b> <b>Appendix 2</b>				
<b>3. DESCRIPTION</b> The EEA identifies and documents potential environmental impacts of the equipment over various life-cycle phases (test and evaluation following production, operation and maintenance, and demilitarization and disposal) and the associated mitigation measures required to reduce or eliminate them.					
<b>4. APPROVAL DATE</b>	<b>5. OFFICE OF PRIMARY INTEREST</b>	<b>6. GIDEP APPLICABLE</b>			
<b>7. APPLICATION/INTERRELATIONSHIP</b> 7.1. This DID contains content and preparation instructions for the EEA as required by the SOW.					
<b>8. ORIGINATOR</b>	<b>9. APPLICABLE FORMS</b>				
<b>10. PREPARATION INSTRUCTIONS</b> <b>10.1 FORMAT</b> The EEA will be in the Contractor's format. <b>10.2 CONTENT</b> The EEA shall contain the following sections and information, as a minimum: <b>10.2.1 Title Page</b> a. Equipment Name and NSN (if available) b. Originating Directorate: TBD c. DGLEPM EEA Registration Number: TBD d. Assessment Contact: Name, title and company name of the author of the EEA  <b>10.2.2 Executive Summary</b> Provide a brief summary of potential environmental impacts and recommended mitigation measures for each life-cycle (production, test and evaluation following production, operation and maintenance and demilitarization and disposal).  <b>10.2.3 Equipment Description</b> a. Equipment description: Provide an overview of the equipment and identify each major sub-system as per the Equipment Breakdown Structure. b. For each major sub-system, identify the following: i. Ionizing radiation sources (radioisotopes and x-ray). e.g. Uranium, Radon, plutonium and tritium etc. ii. Non-ionizing radiation sources (radiofrequency and lasers). iii. Materials incorporated into the design, including type and composition. For hazardous materials identified in the following table, provide additional information in tabular form as Annex 1 to the report:					
<b>Annex 1 - List of Equipment Parts Containing Hazardous Material</b>					
<b>Material</b>	<b>NSN</b>	<b>Original OEM Part Number</b>	<b>Item Description</b>	<b>Location</b>	<b>Additional Details</b>
Metal components in pure element form, contained in any compound, alloy or mixture or surface treatment containing: arsenic, aluminum, antimony, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, molybdenum, nickel, selenium, silver, thallium and zinc. Precious metals such as gold, silver, rhodium, platinum, palladium, tellurium etc should also be identified.					
Asbestos					Type and Mil Spec
Halocarbons					Include MSDS in Annex 3

Polychlorinated Biphenyl					Form (liquid or solid), quantity (kg), volume (L) and concentration in ppm
Mercury and its compounds					Manufacturer of component, form of mercury (e.g. liquid, vapour, amalgam, metal halide), quantity (kg) volume (L) and concentration in ppm

iv. Controlled Products: All controlled products incorporated into the sub-systems design (i.e. paints/surface treatments, adhesives, lubricants, consumables such as batteries, etc.) and those that are recommended by the Contractor during the in-service life-cycle phase (i.e. lubricants, cleaners, decontaminants, etc.) or contained in the Technical Documentation. For the purposes of the EEA, controlled products are defined as materials/products/consumables that contain the following substances: regulated and proposed to be regulated under the *Canadian Environmental Protection Act, 1999*; targeted in Schedule 1, Toxic Substance List under CEPA and/or subject to the reporting requirements under the National Pollutant Release Inventory (NPRI). Provide the following information for all controlled products in tabular form in Annex 2. All MSDSs are to be provided in Annex 3.

#### Annex 2 – List of Controlled Products

Chemical Product	NSN	Product Part Number / Manufacturer	Ingredient	Chemical Abstract Service Number	Controls*
Adhesives, anti-seize, anti-static, batteries, solvents, cleaners and degreasers, compressed gases, coolant, corrosion inhibitor, cutting fluid, decontaminant, desiccant, detector kit, dielectric compounds, fire extinguishing agent, flame retardant, fuel, grease, inspection penetrant, lubricants, paints and related commodities (topcoat, primer, wash-primer, thinner, paint stripper, powder coating, underbody coating), polishing compounds (automotive polish, leather care), refrigerants sealants, spill kits, welding compounds (solder, flux, electrode etc.), etc.					

\*Controls: Identify if the substance is regulated and proposed to be regulated under the *Canadian Environmental Protection Act, 1999*; targeted in Schedule 1, Toxic Substance List under CEPA and/or subject to the reporting requirements under the National Pollutant Release Inventory (NPRI).

#### 10.2.4 Environmental Assessment

For each lifecycle phase (test and evaluation following production, operation and maintenance, and demilitarization and disposal) discuss the following:

- Lifecycle activities: Describe anticipated activities (including operator and maintenance tasks that are detailed in Contractor provided Technical Documentation) and identify if any of these activities have the potential to: release a polluting substance to air, water or land (e.g. exhaust emissions, hazardous waste, spills, etc.); impact human health; noise or vibration; and/or alter landscape features. Note: The scope of the EEA excludes activities related to the use of munitions.
- Environmental impacts: Describe the potential environmental impacts identified above.
- Mitigation Measures: Describe mitigation measures to eliminate or reduce identified potential environmental impacts, including those that are part of the design, any warning devices, emission control equipment, spill response, safe handling and disposal procedures, training, PPE, labels on equipment, cautions and warnings in the Technical Documentation, monitoring or inspections, etc.

#### 10.2.5 Conclusion and Recommendations

Summarize environmental impacts and recommended mitigation measures for each life-cycle.

#### 10.2.6 References

List any references consulted in the completion of the EEA (such as Canadian legislation, DND policies and procedures, technical documentation, etc.)

Annex 1 – List of Equipment Parts Containing Hazardous Material

Annex 2 – List of Controlled Products

Annex 3 - Material Safety Data Sheets (MSDS) for controlled products identified in the EEA

**MOBILE WASTE WATER TREATMENT PLANT**  
**FIRST ARTICLE TEST PLAN (FATP) TEMPLATE**

**Project Name:**

**DND Contract No:**

**Introduction:**

**First Article Test Plan Objective:**

**Location of the FAT :**

**Tentative date for the FAT :**

**Participants :**

**Matrix definitions:**

*Inspection (I)*

Verification of the physical characteristics by examination of the equipment and associated documentation. Comparison of pertinent characteristics against a predetermined qualitative or quantitative standard. May require moving or partial disassembling of the item to accomplish the verification.

*Test (T)*

Test is a method of verification whereby the properties, characteristics, and parameters of the item are determined by testing the performance against the requirements. Pass/fail criteria are simple yes/no indications.

*Contractor Certification (CC)*

Certification (CC) is a method of confirmation of certain characteristics of the system. The confirmation is provided by some form of internal review or assessment by the Contractor. It could be Statement (S) or Analysis / Calculations (A/C) or Documentation (D).

*External Certification (EC)*

Certification (EC) is a method of confirmation of certain characteristics of the system. The confirmation is provided by some form of external review or assessment by supplier of the Contractor. It could be from an External office (OEM or CSC / CSA) providing a Statement (S) or Documentation ( D).

**Equipment used**

List of test equipment used during the FAT (e.g.: scale, crane, measuring tape, etc).

## First Article Test Plan Matrix

LEGEND	
<b>I</b> Inspection DND / Contractor	<b>T</b> Test with Approved Test Protocol
<b>CC</b> Contractor Certification: Statement (S) or Analysis / Calculations (A/C) or Documentation (D)	<b>EC</b> – External Certification: External office (OEM or CSC / CSA) Statement (S) or Documentation (D)

SOW Ref No.	Requirement as per SOW	Type of inspection				Pass	Fail	Inspector's Initials
		I	D	CC	EC			
<b>3.1</b>	<b>General</b>							
3.1.2	The MWWTP must be capable of handling peak loads as per below duty cycle: • 6:00-8:00am 3±10% m3 of waste water; • 10:00-11:00am 2±10% m3 of waste water; • 2:00-3:00pm 2±10% m3 of waste water; • 6:00-8:00pm 4±10% m3 of waste water; • 10:00-11:00pm 1±10% m3 of waste water;			√ (A/C)				
3.1.4	The MWWTP must meet as a minimum the performance requirements for effluent quality set by Wastewater Systems Effluent Regulations (SOR/2012-139).				√ (D)			
<b>3.2</b>	<b>System Description</b>							
3.2.1	The system must be portable, structurally self-supporting above ground.	√						
3.2.2	The system must include but not limited to: a) one (1) ISO Container, see paragraph 3.3; b) Wastewater treatment system, see para 3.4; c) Electrical system, see paragraph 3.5; d) Control system, see paragraph 3.6, and e) Plumbing system, see paragraph 3.7. The components from b) to e) must be housed in the ISO container.	√						
		√						
		√						
		√						
		√						
<b>3.3</b>	<b>ISO Container</b>							
3.3.1	The MWWTP must be integrated into the twenty (20) foot container.	√						
3.3.1.1	The container in final configuration must be certified and comply with the requirements of the "International Convention for the Safe Containers" (CSC).				√ (D)			
3.3.2	The MWWTP container must be ISO Type 1C (20 ft / 6058 mm length x 8 ft / 2438 mm width x 8.5 ft / 2591 mm height) in travel configuration with ISO interlock corner castings	√	√					
3.3.5	The structural members of the container must be made of Weathering Steel.				√ (D)			
3.3.6	The container must be in accordance with the standards ISO 668, ISO 1161, ISO 1496-1.				√ (D)			
3.3.6.1	In the final configuration (ready for shipping) the MWWTP must pass successfully the waterproofness test as per ISO 1496-1 paragraph 6.14.		√					