



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

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

**Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur**

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

Title - Sujet SUPPLY OF LN2, CO2, & TANK RENTALS	
Solicitation No. - N° de l'invitation HT348-150431/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client HT348-150431	Date 2015-10-28
GETS Reference No. - N° de référence de SEAG PW-\$\$HL-420-68054	
File No. - N° de dossier hl420.HT348-150431	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-11-04	
Time Zone Fuseau horaire Eastern Standard Time EST	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Dumm, Jennifer	Buyer Id - Id de l'acheteur hl420
Telephone No. - N° de téléphone (819) 956-9675 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

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

Solicitation No. - N° de l'invitation
HT348-150431/A
Client Ref. No. - N° de réf. du client
HT348-150431

Amd. No. - N° de la modif.
002
File No. - N° du dossier
h1420.HT348-150431

Buyer ID - Id de l'acheteur
h1420
CCC No./N° CCC - FMS No./N° VME

THE ORIGINAL REQUEST FOR PROPOSAL IS AMENDED AS FOLLOWS:

DELETE: ANNEX B – Requirement and related information pertaining to the supply of liquid nitrogen and carbon dioxide (Sept 2015)

INSERT: ANNEX B – Requirement and related information pertaining to the supply of liquid nitrogen and carbon dioxide (October 2015)

Annex B has been modified to add a NEW PARAGRPH 3.12

HEALTH CANADA HAS PROVIDED THE FOLLOWING RESPONSE TO A SUBMITTED QUESTION:

Q1. I would like to submit the following question with regards to the existing piping for the nitrogen and CO2:

TSSA's (Technical Standards and Safety Authority) Boilers and Pressure Vessels (BPV) Safety Program regulates all pressure-retaining components manufactured or used in Ontario to ensure boilers, pressure vessels and piping systems conform to the Technical Standards and Safety Act, 2000 and applicable regulations, codes and standards. TSSA is involved in all aspects of the life cycle of pressure vessels: from design, to manufacture, to installation, to operation and maintenance.

The CO2 and N2 containers that we would install, if we were the successful bidder, would meet the TSSA's Boilers and Pressure Vessels regulations. Can you please confirm that the existing piping in place for both the liquid nitrogen from the outside fill port to the tank inside and the carbon dioxide lines from the cage outside to the respective use points have a P number and have been inspected and authorized by the TSSA?

A1. All piping within the building is the responsibility of Health Canada and the maintenance and inspection of these pipes are being conducted as per the relevant standards and regulations.

Requirements and related information pertaining to the supply of liquid nitrogen (LN₂) and carbon dioxide (CO₂)

Biologics and Genetic Therapies Directorate (BGTD)

Health Products and Food Branch (HPFB)

Health Canada

October 2015

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1.0 Scope

This document applies to the supply of liquid nitrogen (LN₂), carbon dioxide (CO₂) and related contractor-owned equipment required by the Biologics and Genetic Therapies Directorate of Health Canada, located in Ottawa, Ontario.

2.0 Biologics and Genetic Therapies Directorate (BGTD) Facility Brief

The laboratory facility located at Tunney's Pasture in Ottawa Ontario, is part of Health Canada and is used for the testing of biologics as part of the Lot Release Program.

The laboratories use liquid nitrogen (LN₂) for the cryopreservation and storage of cell lines as well as carbon dioxide (CO₂) for the functioning of incubators for the growth of various cell lines.

Liquid nitrogen (LN₂)

LN₂ consumption is fairly stable, with added use upon occasion, such as when cell line inventories are verified. Typical consumption of LN₂ has been averaged at 50L (34.11 cubic meters) per day for a total of approximately 18, 500L (12,621 cubic meters) per year.

Carbon dioxide (CO₂)

CO₂ consumption is fairly stable, with added use upon occasion, depending on the number of tests being performed that require cell line growth and maintenance. Typical consumption of CO₂ has been averaged at 30L (16.26 cubic meters) per day for a total of approximately 11, 000L (5,962 cubic meters) per year.

Because LN₂ and CO₂ consumption is fairly consistent, orders will be scheduled using an "automatic" ordering system between the BGTD and the contractor. All LN₂ and CO₂ orders will be supplied by the contractor within 24 hours after receiving the automatic notifications for fills.

3.0 Statement of Work

The Contractor Shall:

- 3.1 Provide a thoroughly detailed data package indicating pipe sizes, storage capability, storage tank data, i.e. size, weight, control system schematic(s), tank foot print(s), electrical requirements and also manufacturer's specifications of valves, safety valves, pressure relief valves regulators, etc. Delivery period for this package will be addressed in the RFP and in the contract.
- 3.2 Both CO₂ and LN₂ systems must comply their respective requirements as stated in various sections in the National Fire Protection Agency (NFPA) Code 55: Compressed gases and cryogenic fluids code

- 3.3 LN₂ and CO₂ deliveries will be supplied on an "automatic" basis, except in extreme weather conditions where no vehicles should be on the road or an accident where delivery would be impossible. If this event should ever occur, the contractors dispatch must notify the BGTD immediately of this incident. As the result of the above conditions it is imperative that the LN₂ and CO₂ contractor provide a replacement delivery of LN₂ and/or CO₂ within 24 hours. The BGTD facility will attempt to minimize the use of LN₂ and CO₂ until the replacement delivery arrives.
- 3.4 The contractor must deliver the gases outside the loading dock area of the facility. CO₂ tanks are stored outside the building and can be replenished directly from that area. The LN₂ tank is located within the building; however, the tank fill can be done from the exterior, in a location close to the CO₂ tanks. Access to the LN₂ tank requires BGTD approval and escort (i.e. by scheduling an appointment through the Laboratory Operations Manager). The systems must allow for redundancy so that no gas is ever completely depleted.
- 3.5 Provide BGTD with access to an electronic telemetry system to allow for 24 hour, 7 day per week monitoring of the distribution systems. The system must be able to do the following:
 - 3.5.1 Send an automatic fill request to the contractor by telephone or email when levels are low. The parameters for low levels are to be established in conjunction with BGTD and are to allow reasonable time for delivery. The tanks must never be allowed to be completely emptied.
 - 3.5.2 Be secure and require password access by BGTD approved personnel, permissions must include allowing BGTD staff to change alarm parameters as required (Note: if the BGTD cannot change parameters directly, the contractor shall provide instructions on requesting parameter changes to BGTD; the contractor must be able to make the changes to the system within 24 hours of receiving a written request)
 - 3.5.3 Monitor both LN₂ and CO₂ in terms of line pressures and tank levels.
 - 3.5.4 Have the ability to contact approved BGTD personnel by email and/or telephone when gas levels are low.
- 3.6 Provide, as part of the Supply Contract on an "as required" basis, expertise to the BGTD regarding the storage, transfer and safe use of LN₂ and CO₂.
- 3.7 Provide semi-annual inspection of the storage tanks, transfer equipment and any other contractor supplied equipment, upon request of, and coordinated through BGTD. A comprehensive report on the state of the equipment shall be provided to the BGTD within 7 days following the inspection. In addition, calibration certificates for any

measuring equipment used by the contractor to certify his/her equipment must also be provided with the inspection report.

- 3.8 Maintain the surface finish on all storage tanks and contractor-supplied equipment in good condition. Any surface rust should be dealt with in a timely and suitable manner. The BGTD retains the right to require the contractor to make repairs as seen fit by the BGTD.
- 3.9 Provide sufficient insulation to contractor's LN₂ supply piping located on the tank storage pad in order to maintain LN₂ losses to a minimum.
- 3.10 Provide the BGTD with a list of qualified persons and telephone numbers, to respond to any emergency, on a 24 hour a day basis, regarding the contractor furnished equipment, and product. Adequate backup service and dispatch personnel are the responsibility of the contractor.
- 3.11 Provide emergency maintenance and repair services on a 24-hour a day basis. The contractor must be capable of responding on site to emergency repair requests within a maximum period of eight (8) hours. Critical spare parts must be readily available for these repair purposes. Furthermore, any repair work to be performed must be coordinated with the BGTD to minimize any impact on any testing being performed.
- 3.12 The systems must allow for proper redundancy, even when maintenance and/or repair work needs to be undertaken; the activities must be seamless to ensure consistent gas delivery.
- 3.13 At the time of initial installation, provide multiple valves, LN₂ and CO₂ filters or strainers, regulators, safety devices and interconnecting LN₂ and CO₂ supply pipes needed to meet the requirements outlined herein. Contractor installed filters or strainers are required to ensure no foreign objects or materials enter the BGTD facility plumbing systems, which may cause system failures.
- 3.14 All cryogenic valves and regulators shall be clearly labeled indicating the purpose of such valves and regulars and normal operating mode, i.e. manual LN₂ tank isolation valve, normally closed.
- 3.15 All labeling shall be in accordance with existing practices, and must comply with all WHMIS and/or GHS requirements.
- 3.16 Ensure all contractors' LN₂ and CO₂ lines and auxiliary equipment are carefully and adequately supported about the storage tank pad(s) to the satisfaction of the BGTD.
- 3.17 Provide to the BGTD, within 60 days of contract award, a thorough familiarization and training course at the BGTD facilities on all contractor supplied equipment to BGTD staff. This should include safety features, procedures for correct operation, etc. The training course, complete with course material, will include a minimum of 2 sets of complete,

clear and legible documentation on all contractor-supplied equipment safety features, procedures for correct operation, etc.

- 3.18 Clearly identify each LN₂ and CO₂ storage tanks. This should include size of each tank, storage capacity, and nominal operating pressures including tolerance and tank refill specifications. This data shall be clearly displayed in both official languages for the contractor driver filling information.
- 3.19 Install, where practical, interconnecting piping overhead, so as not to interfere with personal passage.
- 3.20 If any modifications to the contractor's supplied equipment that is outside the scope of this contract are required, the cost of the additional work, including parts and labor, would not be covered under the existing LN₂ and CO₂ contract. These costs will be charged by the contractor separately as and when they occur.
- 3.21 Advance notice (48 hours) must be provided to the BGTD prior to any work by the LN₂ and CO₂ contractor on any level or pressure sensor that is connected to the BGTD's interface equipment. BGTD remotely monitor each tank's pressure and level values with this system. Failure to inform the BGTD of such work shall result in the LN₂ and CO₂ contractor being held responsible for any and all damage caused by this work to the BGTD's monitoring system as a result of this work.
- 3.22 The repair personnel must contact the BGTD's Laboratory Coordination Unit) before proceeding to ensure that such work will not impact any test in progress.

The BGTD shall:

- 3.23 Provide the contractor with 24-hour notice of a requirement for additional LN₂ and/or CO₂ deliveries. Specifically, when the contractor has been notified by the Laboratory Operations Manager or designated appointee. On a request for an additional LN₂ and/or CO₂ delivery, the BGTD (under normal circumstances) is prepared to wait up to 24 hours for delivery compliance.
- 3.24 Provide exiting BGTD tank storage pads for contractor use as well as existing building pipes for internal delivery.
- 3.25 Provide well-lit access to the storage tank pads for filling process as well as maintain access roads in all weather conditions to allow access to the site for filling of contractor storage tanks.
- 3.26 Provide a physical location and hydro power for mounting the contractor supplied panel and installed remote LN₂ and CO₂ pressure and level gauges

4.0 Gas quality

- 4.1 The contractor shall supply LN₂, industrial grade, in accordance with the Compressed Gas Association (CGA) Standard (99.998% minimum pure Nitrogen)
- 4.2 The contractor shall supply CO₂, CP grade (99.5%), in accordance with the Compressed Gas Association (CGA) Standard.
- 4.3 The quality of the both gases shall be clearly stated in writing upon request by the BGTD. Impurities, i.e. oxygen, carbon bearing gases, moisture, etc., shall be stated in ppm.
- 4.4 The contractor will provide, periodically, a certificate of analysis of both gases to ensure the purity of the delivered product. BGTD reserves the right, on occasion, to request this certificate of analysis for client quality assurance purposes.

5.0 Miscellaneous

- 5.1 The contractor shall provide a liquid product, of meter quality (90-100% liquid) to the edge of the cement pad. The vendor has no control of the product after the edge of the pad.
- 5.2 The contractor shall guarantee that the quantity of product ordered, be the quantity of product delivered to the BGTD at the storage tanks.
- 5.3 All contractor supplied equipment shall be state of the art in design and style, reliable and safely sheltered from the environment.
- 5.4 Contractor must ensure all critical spare parts for contractor supplied equipment are locally available and any non-locally available parts are held in the contractor's inventory for the BGTD's exclusive use. BGTD and the successful bidder shall mutually agree on a list of critical spare parts.
- 5.5 The contractor must maintain all contractor-supplied and installed equipment in good working order in accordance with manufacturers specifications at all times.
- 5.6 All contractors supplied and installed interface wiring and conduit from sensors, meters, monitors, etc., shall remain in place upon the termination of this contract.
- 5.7 Following the awarding of the contract, and at a mutually convenient time, the BGTD will convene an information session with the successful bidder and all subcontractors to familiarize both parties with the overall objectives and operations.

- 5.8 Advance notice must be given to the BGTD prior to any work on level and/or pressure sensors by the supplier or vendor to ensure that no damage is done to BGTD equipment interfacing with said sensors. Failure to inform the BGTD of such work shall result in the supplier or vendor being held liable for any and all damages to the BGTD's equipment.