

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Public Works and Government Services Canada  
ATB Place North Tower  
10025 Jasper Ave./10025 ave. Jasper  
5th floor/5e étage  
Edmonton  
Alberta  
T5J 1S6  
Bid Fax: (780) 497-3510

**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**  
Public Works and Government Services Canada  
ATB Place North Tower  
10025 Jasper Ave./10025 ave Jasper  
5th floor/5e étage  
Edmonton  
Alberta  
T5J 1S6

<b>Title - Sujet</b> FLUID COOLER INSTALL	
<b>Solicitation No. - N° de l'invitation</b> 39903-150572/A	<b>Amendment No. - N° modif.</b> 002
<b>Client Reference No. - N° de référence du client</b> CFIA 39903-150572	<b>Date</b> 2015-09-25
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWU-201-10546	
<b>File No. - N° de dossier</b> PWU-5-38075 (201)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-10-06</b>	<b>Time Zone</b> Fuseau horaire Mountain Daylight Saving Time MDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ho (RPC), Hector	<b>Buyer Id - Id de l'acheteur</b> pwu201
<b>Telephone No. - N° de téléphone</b> (780) 901-0989 ( )	<b>FAX No. - N° de FAX</b> (780) 497-3510
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

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**This Amendment is raised to extend the solicitation closing date and to clarify questions raised by bidders:**

**DELETE:**

September 29, 2015

**INSERT:**

October 6, 2015

**QUESTION:**

Is there any asbestos that may be encountered while completing the work for this project

**ANSWERS:**

No

**QUESTION:**

Please advise if we will be able to shut down and drain the piping that we need to tie-into or will we be required to hot tap into the system.

**ANSWER:**

You will be replacing the Ethylene Glycol in the system with new 50 % propylene glycol. The system will need to be drained.

**QUESTION:**

What hour (Day/ Night/weekends) will be available to us for the work to be completed

**ANSWER:**

The hours of operation are 7:30 am - 4 pm

**QUESTION:**

Will parking be made available to workers on site

**ANSWER:**

Yes

**QUESTION:**

Is there a spot allocated to place a garbage bin

**ANSWER:**

Yes

**QUESTION:**

Is it possible to have an extension to the closing date on this project

**ANSWER:**

No

**QUESTIONS:**

1. Note M1 states remove and replace 50% Propylene Glycol for the connections to HE-5, but note M-2 states to remove existing 50% Ethylene Glycol and replace with new 50% Ethylene glycol?

2. Is the housekeeping pad for HE-6 existing? Or do we supply a new one? If so is there any schedule for concrete and rebar, along with waterproof membrane preparation in basement Mech room.

3. Are we to reuse the inertia pads for the new pumps in the Fan loft?

4. Is there Post tension cables in the floor of the Mech Room and Main floor as there is in the roof slab?

5. Please clarify the scheduling requirements for the shut downs of the cooling system for tie ins?

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6. Paint or Epoxy requirements for the Fan Loft Mechanical room, interstitial hallway, and the Basement Mech room.

7. Coordinating building fire alarms and smoke for demo and welding in the building.

8. Air quality requirements while welding.

9. Can you confirm the CFIA is looking for a dry cooler? That is what the plans and scheduled seem to indicate, but the specification that was issued (section 23 65 10) seems to be written for a closed circuit cooling tower (fluid cooler) as they talk about a pan, PVC media, hand rails and hot dipped galvanized coils, which are not present in a dry cooler. (i.e. will there be a need for a sump and spray water system as the spec indicates? Or will the unit operate dry 100% of the time with no need for the sump and spray water system?

**ANSWER:**

See attached PDF Document Addendum Number One

**All other Terms and Conditions remain unchanged.**

## ADDENDUM M-01



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<b>Project:</b>	CFIA Dry Cooler	<b>Project No.:</b>	151-05170-00
<b>Date:</b>	September 24, 2015	<b>Client Proj. No.:</b>	H0004
<b>To:</b>	CFIA, Attn: Craig Armitage ( <a href="mailto:craig.armitage@inspection.gc.ca">craig.armitage@inspection.gc.ca</a> )		
<b>Distribution:</b>	WSP, Attn: Art Johnson ( <a href="mailto:art.johnson@wspgroup.com">art.johnson@wspgroup.com</a> ) WSP, Attn: Sandeep Sharma ( <a href="mailto:sandeep.sharma@wspgroup.com">sandeep.sharma@wspgroup.com</a> )		

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### TO ALL BIDDERS OF RECORD

#### **General Notes:**

1. This Addendum is used prior to Tender closing to provide for certain revisions as noted herein.
  2. All such revisions will become part of the Work and the effects shall be included in the Tender Price.
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### **1.0 DRAWING M-01 – PUMP MOUNTING DETAIL REVISION**

- 1.1 Pumps P-47 and P-48 shall be installed on existing housekeeping pads as per the revised typical pump detail shown in the attached mechanical sketch MSK-01. Remove inertia bases from existing pumps P-47 and P-48 prior to installation of new pumps.

### **2.0 SECTION 23 65 10 - DRY COOLER SPECIFICATION REPLACEMENT**

- 2.1 Replace entire specification section 23 65 10 titled "Condensers Coolers and Cooling Towers" With attached specification section 26 65 10 titled "Dry Coolers".

### **3.0 ADDITIONAL GENERAL PROJECT NOTES**

- 3.1 Contractor shall coordinate location of HE-6 with facility staff on site. Heat exchanger shall be located on existing housekeeping pad in approximately the location shown on drawings; confirm housekeeping pad dimensions are suitable for selected heat exchanger and provide any and all necessary modifications to housekeeping pad to suit. Any modifications performed shall match existing, including but not limited to, materials, finishes and waterproofing membrane used in construction of housekeeping pad.
- 3.2 Equipment shut down scheduling shall accommodate owners continued use of premises and shall be coordinated by maintenance staff. The contractor shall coordinate service outages a minimum of 10 days in advance.
- 3.3 Contractor shall patch, paint and restore all walls, ceilings and floors which are affected under this contract to original and acceptable condition by CFIA and prior to substantial completion, visible touch up work will not be acceptable forms of patching. All paint, epoxy and finishes shall match existing and shall be approved by CFIA. Note that for opening on the roof, contractor shall retain and use existing roofing contractor in order to maintain the warranty on the roof. No other alternative will be accepted.

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5940 Macleod Trail SW, Suite 900  
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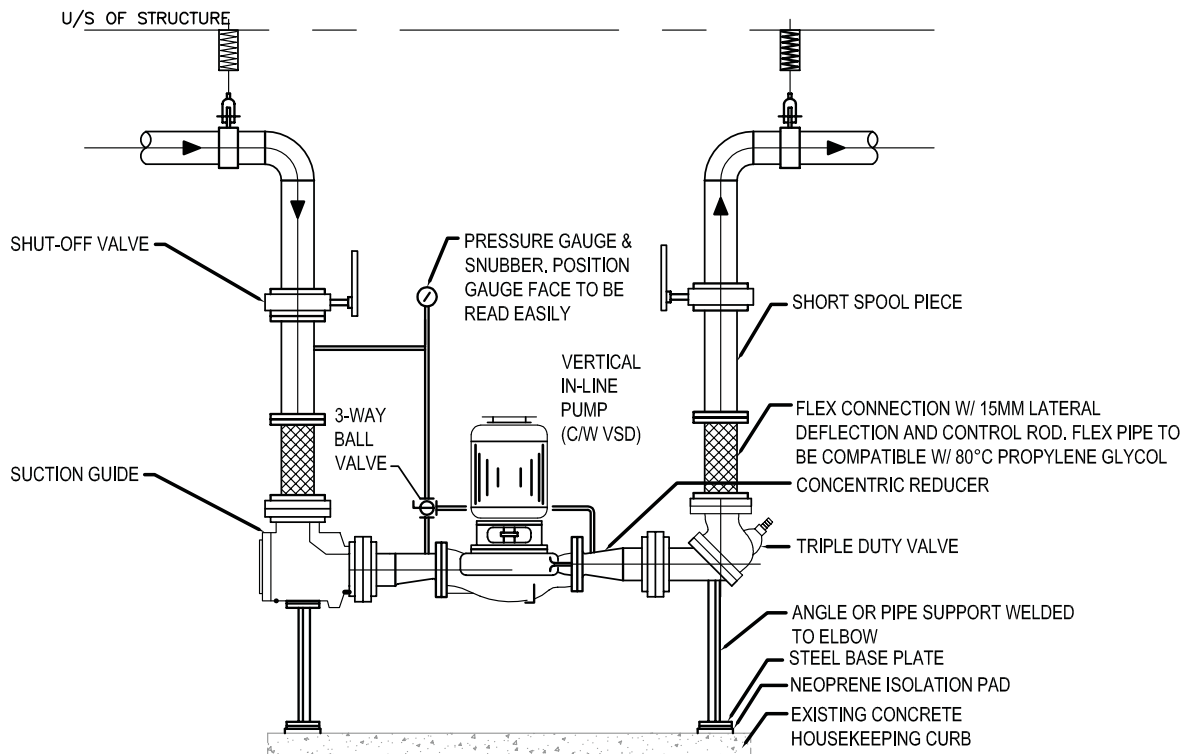
- 3.4 Provide adequate temporary welding ventilation (supply and source capture exhaust) for each welding operation on site. Use fit for purpose PPE for the work to be performed.
- 3.5 Based on the structural drawings we have received, "Level One" appears to be a conventionally reinforced structural slab to beams; however the other levels, including the mechanical level are Post-Tensioned. Prior to drilling, cutting or coring ensure that the area has been scanned and reviewed by a structural engineer for the impact on the base building structure
- 3.6 Contractor shall coordinate with CFIA maintenance staff to temporarily disable fire and smoke alarm, in the applicable zone, for all construction activities that have the potential to trigger a fire alarm.

Issued by,

A handwritten signature in black ink that reads "Mike Medinsky".

Mike Medinsky, P.Eng.  
Mechanical Engineer  
[mike.medinsky@wspgroup.com](mailto:mike.medinsky@wspgroup.com)

Attachments : MSK-01, 23 65 10 Dry Coolers



**8** TYPICAL PUMP DETAIL  
M-01 SCALE: N.T.S.



900-6940 MACLEOD TRAIL SW  
CALGARY ALBERTA CANADA T2H 2G4  
TEL.: 1-403-255-7946 | FAX: 1-403-255-7996 | WWW.WSPGROUP.COM

PROJECT:

**CFIA LAB DRY COOLER PROJECT**

TITLE:

**MECHANICAL LAYOUT**

DRAWN BY:

MM

SCALE:

NTS

CHECKED BY:

MM

PROJECT NO:

H004

EXTRACT FOR:

ADDENDUM:

M-01 ☒

DIRECTIVE:

☐

CHANGE ORDER:

☐

FROM SHEET:

M-01

DATE:

09.23.2015

EXTRACT NO:

MSK-01

**Part 1            General**

**1.1            SUMMARY**

- .1    Section Included:
  - .1       Materials, components, framing, installation and testing for a closed circuit drycooler.

**1.2            RELATED SECTIONS**

- .1    Section 01 33 00 - Submittal Procedures.

**1.3            PRODUCTS SUPPLIED BUT NOT INSTALLED UNDER THIS SECTION**

- .1    Anchor bolts: size anchor bolts to withstand seismic acceleration and velocity forces as defined in 23 05 48 – Vibration and Seismic Controls for HVAC Piping and Equipment.

**1.4            REFERENCES**

- .1    American Society for Testing and Materials International, (ASTM)
  - .1       ASTM A48/A48M, Standard Specification for Gray Iron Castings.
  - .2       ASTM A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - .3       ASTM A153/A153M, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
  - .4       ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealed) by the Hot-Dip Process.
  - .5       ASTM D520, Standard Specification for Zinc Dust Pigment.
  - .6       ASTM D1784, Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
  - .7       ASTM F594, Standard Specification for Stainless Steel Nuts.
- .2    Canadian Standards Association (CSA International)
  - .1       CSA B52, Mechanical Refrigeration Code.
- .3    American National Standards Institute (ANSI)
  - .1       ANSI S1.13, Methods for the Measurement of Sound Pressure Levels.
- .4    Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1       Material Safety Data Sheets (MSDS).



- .5 Underwriters Laboratories' of Canada (ULC).
  - .1 CAN/ULC–S102, Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
- .6 National Electrical Manufacturers Association (NEMA)
  - .1 NEMA ICS 1, Industrial Control and Systems.
  - .2 NEMA ICS 2, Industrial Control and System Controllers, Contactors, and Overload Relays Rated Not More Than 2,000 Volts AC or 750 Volts DC.
  - .3 NEMA MG 1, Motors and Generators.

## **1.5 PERFORMANCE REQUIREMENTS**

- .1 Dry Coolers:
  - .1 Fill system with water and glycol.
  - .2 Pressure drop: as indicated
- .2 Maximum pump head: as indicated.
- .3 Electrical: maximum full load running amps: as indicated.
- .4 All equipment performance requirements to comply with drawings.

## **1.6 SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 – Submittal Procedures. Include product characteristics, performance criteria, and limitations.
    - .1 Submit two (2) copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Shop Drawings:
  - .1 Submit shop drawings in accordance with Section 01 33 00 – Submittal Procedures.

- .2 Indicate:
  - .1 Connections, piping, fittings, valves, control assemblies and ancillaries, identifying factory and field assembled.
  - .2 Wiring as assembled and schematically.
  - .3 Dimensions, construction details, recommended installation and support, mounting bolt hole sizes and locations and point loads.
  - .4 Vibration and seismic control measures.
  - .5 Manufacturers recommended clearances.
- .3 Quality assurance submittals: submit following in accordance with Section 01 33 00 – Submittal Procedures.
  - .1 Test Reports:
    - .1 Submit certified test reports from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
  - .2 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
  - .3 Instructions: submit manufacturer's installation instructions.
  - .4 Manufacturer's Field Reports: manufacturer's field reports specified.
- .4 Closeout Submittals:
  - .1 Provide operation and maintenance data for incorporation into manual specified in Section 01 78 00 – Closeout Submittals.
  - .2 Include:
    - .1 Description of equipment giving manufacturers name, type, model, year, capacity.
    - .2 Start-up and commissioning procedures.
    - .3 Details of operation, servicing and maintenance.
    - .4 Recommended spare parts list.

## **1.7 QUALITY ASSURANCE**

- .1 Qualifications:
  - .1 Installer: company or person specializing in dry cooler installations with five (5) years' experience approved by manufacturer.
- .2 Regulatory Requirements: work to be performed in compliance with Canadian Environmental Protection Act (CEPA) and Transportation of Dangerous Goods Act (TDGA) and applicable Provincial regulations.
- .3 Health and Safety:
  - .1 Do construction occupational health and safety in accordance with applicable Health and Safety Requirements.

## **1.8 DELIVERY, STORAGE, AND HANDLING**

- .1 Packing, shipping, handling and unloading:
  - .1 Deliver, store and handle in accordance with manufacturer's written instruction and Section 01 61 00 – Common Product Requirements.
- .2 Storage and Protection:
  - .1 Store materials in dry location.
  - .2 Store and protect materials from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
- .3 Waste Management and Disposal:
  - .1 Construction/demolition waste management and disposal: separate waste materials for reuse and recycling in accordance with Section 01 74 19 - Construction/Demolition Waste Management and Disposal.

## **1.9 MAINTENANCE**

- .1 Extra Materials:
  - .1 Furnish spare parts data for each different item of equipment specified, after approval of detail drawings, submit with operation and maintenance manual.
  - .2 Include with data complete list of parts and supplies, source of supply, recommended spare parts list for one (1) year of operation, and list of parts recommended by manufacturer to be replaced on routine basis.

## **Part 2 Products**

### **2.1 SUSTAINABLE REQUIREMENTS**

- .1 Materials and products in accordance with Section 01 47 15 – Sustainable Requirements: Construction.

## **2.2 GENERAL**

- .1 Units shall be self-contained, packaged, factory assembled and prewired suitable for outdoor use consisting of casing, condensing coil and fans, motors, integral wiring and controls, screens, pipe headers, control transformer and control panel
- .2 Ensure major equipment including drive assemblies, fans, and motors have manufacturer's name, address, style, model, serial number, catalogue number on plate secured to item of equipment.
- .3 Plates: durable and legible throughout equipment life and made of anodized aluminium or stainless steel.
- .4 Fix plates in prominent locations with nonferrous screws or bolts.

## **2.3 SIZE AND WEIGHT**

- .1 Dimensions: as indicated.
- .2 Operating weight: as indicated.

## **2.4 CABINET**

- .1 Construct of heavy gauge galvanized steel with baked enamel finish, sectionalized with individual fan chambers, bolted construction, coil independent of fan section, side access panels for coil inspection and cleaning.

## **2.5 HEAT EXCHANGER**

- .1 Coil: Seamless copper tubing with mechanically bonded aluminum fins.
- .2 Fans: Vertical discharge, direct drive axial fans, resiliently mounted with guard and motor.
- .3 Motors: Permanently lubricated ball bearing motors with built-in current and overload protection.
- .4 Provide removable, washable lint screens at air inlet

## **2.6 VIBRATION ISOLATORS**

- .1 To Section 23 05 48 - Vibration and Seismic Controls for HVAC Piping and Equipment.

## **2.7 CONTROLS**

- .1 Wire all motors to a weather resistant control box complete with motor contactors and fuses (per motor), disconnect switches, aquastat, terminal block and control transformer.

- .2 Refer to drawings for control sequences.

### **Part 3 Execution**

#### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

#### **3.2 GENERAL**

- .1 Mount on structural supports and vibration isolators as indicated and to manufacturer's recommendations.
- .2 Provide shut-off valves on supply and return piping connections.
- .3 Provide temperature and pressure plugs on piping connections (in and out).
- .4 Ensure clearance for servicing and maintenance as recommended by manufacturer.
- .5 Manufacturers field service representative to approve installation, to supervise start up and to instruct operators.
- .6 Install level on vibration isolators.
- .7 Start-up and test equipment.

#### **3.3 ADJUSTING**

- .1 Lubricate bearings with oil or grease as recommended by manufacturer.
- .2 Tighten belts to manufacturer's specified tension where required.

#### **3.4 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 – Cleaning.
- .2 Wipe equipment clean, and remove traces of oil, dust, dirt, or paint spots.
- .3 Maintain system in clean condition until final acceptance.
- .4 Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**