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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 Government Services Canada- Bid Receiving / Réception des soumissions
189 Prince William Street
Room 421
Saint John
New Bruns
E2L 2B9

Title - Sujet New Water Transmission Main and Wel	
Solicitation No. - N° de l'invitation EC016-130976/A	**Amendment No. - N° modif.** 003
Client Reference No. - N° de référence du client R.000817.001	**Date** 2012-08-16
GETS Reference No. - N° de référence de SEAG PW-$PWB-007-3109	
File No. - N° de dossier PWB-2-35041 (007)	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2012-08-23**	**Time Zone** **Fuseau horaire** Atlantic Daylight Saving Time ADT
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☐ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Ellis-Herring , Alison PWB	**Buyer Id - Id de l'acheteur** pwb007
Telephone No. - N° de téléphone (506) 636-3908 ( )	**FAX No. - N° de FAX** (506) 636-4376
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**
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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**	

Canada

Cette modification de l'invitation numéro 3 est soumise et comprend la modification suivante.

La modification qui suit apportée aux documents de soumission entre en vigueur dès maintenant. L'addenda fera partie des documents de contrat.

Toutes autres conditions ne changent pas.

Modification numéro 3

1. DEVIS

1. **Enlever** Section 23 20 13 - Pressure Piping Systems Inside Buildings **et remplacer avec** Section 23 20 13 -Pressure Piping Systems Inside Buildings ci-attaché.

2. **Ajouter** Section 26 05 32 - Outlet Boxes, Conduit Boxes and Fittings ci-attaché.

Part 1 General

1.1 SUMMARY

.1 Related Sections:

.1 Section 01 33 00 - Submittal Procedures.
.2 Section 01 35 29.06 - Health and Safety Requirements.
.3 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
.4 Section 01 78 00 - Closeout Submittals.
.5 Section 01 91 13 - General Commissioning (Cx) Requirements.
.6 Section 03 20 00 - Concrete Reinforcing.
.7 Section 03 30 00 - Cast-in- Place Concrete.
.8 Section 23 05 06 - Installation of Pipework, Flushing and Disinfection.
.9 Section 23 05 17 - Pipe Welding.
.10 Section 23 05 53.01 - Mechanical Identification.

1.2 REFERENCES

.1 American Iron and Steel Institute (AISI)

.2 American Society for Testing and Materials International (ASTM)

.1 ASTM A53/A53M-02, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless.
.2 ASTM A193/A193M-04a, Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service.
.3 ASTM A194/A194M-04, Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both.
.4 ASTM A307-03, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.

.3 Canadian Standards Association (CSA International)

.1 CSA B51-03, Boiler, Pressure Vessel and Pressure Piping Code.

.4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.5 Public Works and Government Services Canada (PWGSC)

.1 Real Property Branch / Professional and Technical Services / Architecture and Engineering Resources / Mechanical and Maintenance Engineering / Utilities Engineering (RPB/PTS/AER/MME/Utilities Engineering).
.2 Real Property Branch / Property and Facilities Management / Operational Support Services / Utilities Management Services (RPB/PFM/OSS/Utilities Management Services).

1.3 SYSTEM DESCRIPTION/CENTRAL SYSTEM DESIGN REQUIREMENTS

.1 Building system design requirements to be established by Utilities Engineering to ensure building system design is compatible with central plant design.

1.4 SUBMITTALS

.1 Submit shop drawings and product data in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data: submit WHMIS MSDS in accordance with Section 01 30 00 – Submittal Procedures.

.3 Include in shop drawings: plans, elevations, sections and piping isometrics and construction details where not specifically indicated, of following.

- .1 Prefabricated sections with field connection points.
- .2 Branch connections.
- .3 Equipment connections.
- .4 Pipe supports.
- .5 Include relevant engineering data.
- .6 Vents, drains.
- .7 Pipeline identification data.

.4 Closeout Submittals:

- .1 Project Record Documents: in accordance with Section 01 78 00 - Closeout Submittals and 21 05 01 - Common Work Results for Mechanical supplemented with:
  - .1 Information relating to elevations, inverts and location of piping, branches, anchors, expansion joints, loops.
  - .2 Valve data.
  - .3 Details of permanent instrumentation.
  - .4 Details of permanent provisions for temporary instrumentation.
  - .5 Access points.
  - .6 Details of pipe grades, vents, drip points.
  - .7 Drainage provisions at low points.
- .2 Maintenance Data: provide maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.5 QUALITY ASSURANCE

.1 Regulatory Requirements: ensure Work is performed in compliance with applicable Provincial /Territorial regulations.

.2 Inspections:

- .1 Inspect new piping prior to hydrostatic test by Departmental Representative
- .2 Departmental Representative to contact for requirements for inspection and testing of system modifications, design changes or repairs done in house.

.3 Health and Safety:

.1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Be responsible for shipping, delivery, unloading, storage of materials.

.2 Handle and store in manner to ensure that materials and coatings are not damaged.

.3 Waste Management and Disposal:

.1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

.2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard and packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.

.4 Place materials defined as hazardous or toxic in designated containers.

.5 Handle and dispose of hazardous materials in accordance with CEPA, TDGA, Regional and Municipal regulations.

.6 Ensure emptied containers are sealed and stored safely.

.7 Fold up metal and plastic banding, flatten and place in designated area for recycling.

1.7 SYSTEM START-UP - GENERAL

.1 Start-up systems after written approval of installation from Departmental Representative.

.2 Provide 7 days written notice to Departmental Representative of intention to start-up, and commission systems.

.3 Timing: After:

.1 Cleaning is completed.

.2 Pressure tests are completed.

.3 Water treatment system has been commissioned.

.4 Provide continuous supervision during start-up.

1.8 COMMISSIONING

.1 Instrumentation: verify accuracy of thermometers and pressure gauges by comparison with calibrated test instruments.

.2 Full scale tests: upon completion, conduct full scale tests at maximum design flow rates, operating temperatures and pressures for continuous consecutive period of 48 hours to demonstrate compliance with design requirements.

.3 Reports: in accordance with Section 01 91 13 - General Commissioning (Cx) Requirements: Reports, supplemented as specified herein.

.4 Removal of existing piping, construction by-pass and disinfection of new piping system to be done in accordance with Section 23 05 06 – Installation of Pipework, Flushing and Disinfection.

.5 Training:

.1 In accordance with Section 01 91 13 - General Commissioning (Cx) Requirements: Training of O&M Personnel, supplemented as specified herein.

1.9 MAINTENANCE

.1 Maintenance to be done in accordance with manufacturer's recommendations.

Part 2 Products

2.1 GENERAL

.1 Valves to be repackable under full line pressure while fully open.

2.2 PIPE AND FITTINGS

.1 Piping and fittings:

.1 Interior of building: shall be Schedule 10 type 304L stainless steel as shown on the drawings. The fittings shall be welded stainless steel fittings as shown on the drawings. All piping inside the building shall be cleaned, polished.

.1 Stainless steel Sch. 10 piping may also be roll-grooved for Victualic fittings, Victualic flanges and Victualic Style 89 rigid coupling with ductile iron housing conforming to ASTM A-536, Grade 65-45-12. All connections shall include EPDM gaskets (printed).

.2 The remainder of the piping, including all buried pipes, shall be Schedule 40 type 304L stainless steel unless specified otherwise, including pipe from building to new production well (connection to new pitless adapter).

.3 Piping shall be supported as shown on the drawings.

.2 Gaskets:

.1 Will be 1.6 mm thick, rubber and flat ring.

.3 Nuts and bolts:

.1 All nuts and bolts shall be heavy head machine bolts and nuts, stainless steel Type 316, for inside the building. Use a suitable thread compound to prevent galling when tightening the bolts. All nuts shall be re-tightened after initial installation to ensure that they have not become loose.

.4 Pipe perforations:

.1 All pipe perforations through the concrete floor or walls shall include a galvanized steel sleeve with lock ring or approved equal and they shall be sealed with a

watertight seal. Standard or acceptance: Link-Seal, Proco Pen-Seal or approved equal.

.5 Underground piping (backwash):

.1 Backwash water underground piping shall be PVC Schedule 80 to CSA B137.3 with chemical weld fittings as shown on drawings.

2.3 VALVES

.1 Refer to Section 23 05 23 – Valves.

.2 Refer to Section 23 05 23.05 – Butterfly Valves.

2.4 PRESSURE GAUGES

.1 Refer to Section 23 05 20 – Pressure Gauges, Level Measurements and Chlorine Accessories.

2.5 STRAINERS

.1 Refer to Section 23 05 23 – Valves.

2.6 FABRICATION

.1 Do work in accordance with ASME B31.1M.

.2 Joints:

.1 Accessible locations: screwed, flanged or welded to match piping specification and drawing layout.

.2 Elsewhere: welded throughout, except at flanged components to match piping specification and drawing layout.

.3 Branch connections:

.1 Use butt or socket-weld fittings.

.2 Mains NPS 2-1/2 and smaller: Use weldolets, threadolets, or 2 Mpa half couplings as reinforcements.

.3 Mains NPS 3 and larger: Welded branch connections can be used.

Part 3 Execution

3.1 PREPARATION

.1 Lay out work in accordance with lines and grades as indicated on the drawings.

.2 Verify lines, levels, dimensions as indicated against established benchmarks. Report discrepancies to Departmental Representative and obtain written instruction.

.3 When required by Departmental Representative, provide drawings showing relative locations of various services.

3.2 WELDING

.1 Perform welding in accordance with Section 23 05 17 - Pipe Welding supplemented as specified herein.

.2 Notwithstanding the requirements of referenced section, the following shall apply:

.1 Welding to be in accordance with ASME B31.1M.

.2 Welding to be executed by certified pipe welders.

.3 Pipe fitting to be executed by certified pipe fitters.

3.3 INSTALLATION

.1 Installation to be performed by certified steam fitters.

.2 Install pipework in accordance with Section 23 05 06 - Installation of Pipework, Flushing and Disinfection, as specified herein.

.3 Clearances:

.1 Maintain clearance around systems, equipment and components and between pipes and structures for O&M as indicated and to manufacturer's recommendations, for greater of:

.1 Observation of operation, inspection, servicing, maintenance.

.2 Disassembly, removal of equipment and components without interrupting operation of other system, equipment, components.

.4 Flanges: use suitable graphite lubricant on bolts and nuts.

.5 Butterfly valves: install between weld-neck flanges.

.6 Branch take-offs:

.1 Use welding tees.

.2 Where reducing tees of proper size are unavailable, use available tees with reducers. Tees with increasers not acceptable.

.7 Cap open ends of piping during installation. Remove foreign material from inside piping.

.8 Grade nominally horizontal piping at 0.4% slope to high point for air removal.

.9 Flanges: tighten bolts evenly with torque wrench.

.10 Revisions to location of piping require written approval of Departmental Representative.

.11 Connections to equipment:

.1 Use flanged valves for isolation and ease of maintenance and assembly.

3.4 PIPE SUPPORTS

.1 Install to manufacturer's recommendations and as directed by Departmental Representative and as shown on the drawings.

3.5 VALVES

.1 Install isolating valves at branch take-offs, at pieces of equipment and elsewhere as indicated.

.2 Install in accordance with manufacturer's recommendations.

.3 Install check valves as indicated.

.4 Install butterfly valves, where specified, between weld neck flanges to ensure full compression of liner.

.5 Install in accessible locations.

.6 Depending upon piping configuration and ease of operation, on horizontal pipes install with stem horizontal or above.

.7 Valves to be accessible for maintenance without removing adjacent piping.

3.6 STRAINERS

.1 Install in locations to allow easy access for removal of screen.

3.7 FIELD QUALITY CONTROL

.1 Inspections.

.1 Leave joints in piping systems uncovered until tests are completed and system inspected as directed by Departmental Representative.

.2 Departmental Representative and authority having jurisdiction to inspect new piping prior to hydrostatic pressure tests for compliance with approved drawings and specifications.

.3 Obtain from Departmental Representative requirements for inspection and testing of system modifications, design changes and repairs performed in-house.

.4 Pay costs for inspections.

.2 Hydrostatic Pressure Tests.

.1 Pressure testing to be done in accordance with Section 23 05 06 – Installation of Pipework, Flushing and Disinfection and as follows:

.2 Pressure tests are required to verify quality assurance.

.3 Give Departmental Representative minimum of 48 hours notice of intention to perform pressure tests.

.4 After installation and before concealing, subject piping to hydrostatic pressure tests to 1.5 times maximum working pressure, minimum 1600 kPa and maintain test pressure without loss for 2 hours.

.5 Prior to tests, isolate equipment and other parts which are not designed to withstand test pressure or test media.

.6 Conduct tests in presence of Departmental Representative.

.7 Bear costs for tests, for repairs or replacement, retesting, making good.

.8 Insulate or conceal work after approval and certification of tests by Departmental Representative.

.3 Disinfection of new piping:

.1 Refer to Section 23 05 06 – Installation of Pipework, Flushing and Disinfection.

3.8 IDENTIFICATION

.1 In accordance with Section 23 05 53.01 - Mechanical Identification, supplemented as specified herein.

.2 In addition, identify piping at building entryies.

3.9 DEMONSTRATIONS

.1 Operate at design temperatures, pressures, flow rates for consecutive period of 48 hours to demonstrate compliance with design criteria and design intents.

.2 Demonstrations also to show completeness of O&M personnel training.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 CSA C22.1-2009, Canadian Electrical Code, Part 1.

Part 2 Products

2.1 OUTLET AND CONDUIT BOXES GENERAL

.1 Size boxes in accordance with CSA C22.1.

.2 102 mm square or larger outlet boxes as required for special devices.

.3 Gang boxes where wiring devices are grouped.

.4 Blank cover plates for boxes without wiring devices.

2.2 RIGID PVC OUTLET BOXES

.1 Octagonal outlet boxes for lighting fixture outlets.

2.3 CONDUIT BOXES

.1 Rigid PVC FS or FD boxes with hubs and mounting feet for surface mounted devices.

.2 Steel type boxes for installation in drywall or masonry for concealed wiring of lighting and receptacles.

2.4 FITTINGS - GENERAL

.1 Bushing and connectors with nylon insulated throats.

.2 Knock-out fillers to prevent entry of debris.

.3 Conduit outlet bodies for conduit up to 32 mm and pull boxes for larger conduits.

.4 Double locknuts and insulated bushings on sheet metal boxes.

Part 3 Execution

3.1 INSTALLATION

.1 Use surface mounted rigid PVC type FS boxes with conduit hubs as required where surface mounted rigid PVC conduit is specified.

.2 Use flush mounted metal boxes for devices with concealed wiring.

.3 Seal all boxes with preformed poly boxes and sealant to the vapour barrier.

.4 Support boxes independently of connecting conduits.

.5 Fill boxes with paper, sponges or foam or similar approved material to prevent entry of debris during construction. Remove upon completion of work.

.6 Provide correct size of openings in boxes for conduit connections. Reducing washers are not allowed.

END OF SECTION