



Sydney Tar Ponds Agency
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Date: May 5, 2009

To: ALL BIDDERS

Subject: Addendum #6

ADDENDUM # 6
Tender # STPA 2008S-30
PART A – CO8 COKE OVEN WATER TREATMENT PLANT
AND PART B – CO7 COKE OVEN GROUNDWATER
COLLECTION
for the Sydney Tar Ponds Agency

The following changes are to be noted in the document referenced above:

1) **PART A – CO8 AND PART B – CO7 SECTION 03 30 00 – CAST-IN-PLACE CONCRETE**

(a) Add new clauses 2.1.1.1.1 and 2.1.1.1.2 as follows:

2.1.1.1.1 Use of hydraulic slag as a supplementary cementing material can be optional.

2.1.1.1.2 Use of fly-ash as a supplementary cementing material will not be approved.

(b) Add new clause 2.1.2.1.3 as follows:

2.1.2.1.3 Use of manufactured sand will be considered acceptable.

2) **PART A – CO8 SECTION 07 40 00 PREFORMED METAL PANELS**

(a) Add new Section, attached.

3) **PART A – CO8 SECTION 07 46 13 PREFORMED METAL SIDING**

(a) Delete Section in its entirety.

4) **PART A – CO8 SECTION 07 61 00 SHEET METAL ROOFING**

(a) Delete Section in its entirety.

5) **PART A – CO8 SECTION 22 05 01 COMMON WORK RESULTS - PIPEWORK**

(a) Clause 3.4.7, Limited, if any, video inspection is anticipated.

(b) Clause 3.6.4, If required x-ray testing will be limited to 10% of welds unless welds fail, in which case 100% testing will be required at the Contractors expense.

6) **PART A – CO8 SECTION 23 07 13 THERMAL INSULATION FOR DUCTING**

(a) Duct insulation to have PVC jacket.

7) **PART A – CO8 SECTION 40 05 23 PROCESS VALVES**

(a) Clause 2.8, Bray valves with Bray R4 Series actuators are acceptable.

8) **PART A – CO8 SECTION 44 41 13 PACKAGE WATER TREATMENT SYSTEM**

(a) Delete clause 1.7.2 in its entirety.

(b) Delete clause 1.10.16 in its entirety.

(c) Clause 2.4.2.15, Top manway shall be 600mm diameter. Side bottom manway can be either 600mm diameter or, if elliptical 600mm x **750** mm minimum. Replace **750 with 450**.

(d) Clauses 2.4.6.4, 2.4.6.5 and .6. The discharge (drain/media) valve requirement was clarified in Addendum No. 3. Provide all connections required for influent/effluent etc. for proper operation of the filter system including drain/media connections identified in Addendum No. 3 **plus** allow for two (2) additional 75mm media fill/spare connection with manual valve.

(e) Clause 2.9.6, E+H as an approved flow meter supplier.

(f) Delete clause 2.14.6 and replace with the following:

2.14.6 The manufacturer warrants the media against defects in manufacture or performance (hydraulic or removal capacity) provided the raw water quality is meets the raw water quality stated in Appendix B at the end of this section.

(g) Delete clause 2.14.9 in its entirety.

(h) Delete clause 2.14.11 and replace with the following:

2.14.11 The manufacturer shall provide the materials and labour for the replacement of the media in each filter at least once during the two year warranty period.

9) **DRAWING C08-DWG-P-001/P-002**

(a) Bin shall be a minimum of 1.5 m³ capacity.

10) DRAWING M003

(a) Note 10; provide a standard spill kit for hydrocarbons.

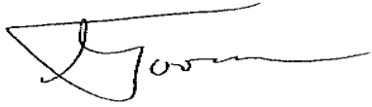
11) MECHANICAL DRAWINGS

(a) Copper pipe to have 12mm insulation with PVC jacket.

These changes will not require a revision to the Closing Date and Time given in the Tender Documents.

In your bid, please indicate that you have noted this change by including the words “Includes Addendum # 006” on your *Bid Form*. If there is more than one (1) Addendum issued for this tender, please acknowledge each separately on your *Bid Form*.

Yours truly,



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PART 1 - GEneral

- 1.1 Summary .1 Comply with Division 1 - General Requirements.
- 1.2 References .1 Comply with the latest edition of the following statutes, codes and standards and all amendments thereto.
- .1 ASTM A653/A653M General Requirements for Steel Sheet Zinc Coated (Galvanized) by the Hot Dip Process.
 - .2 ASTM D1187 Bituminous Coating.
 - .3 CAN/ULC S701 Standard for Thermal Insulation Polystyrene, Boards and Pipe Covering.
 - .4 CAN/ULC S702 Standard for Thermal Insulation, Mineral Fibre for Buildings.
 - .5 CAN/CSA G40.21 M Structural Quality Steels.
 - .6 CSA/G164 M Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .7 CAN/CSA S16.01 M Limit States Design of Steel Structures.
- 1.3 Design Requirements .1 Design work to withstand applicable loads established by the NSBC and applicable local regulations for the locality. Deflection of profile sheets: Maximum 1/180th of span at this loading.
- .2 Design work of this Section, which will support other items or will be required to support structural loads of any nature, shall be completed by a professional structural engineer licensed in the Province of Nova Scotia.
 - .3 Design system to comply with CSA S16.01.
 - .4 Design panel system to allow for thermal movement of components caused by ambient temperature range without causing deterioration of system.
 - .5 Design metal panel system using concealed fastening details.
 - .6 Design panel system to achieve curved cladding shown with uniform radius.
 - .7 Design components to resist vibration when subjected to the effects of wind.

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- 1.3 Design Requirements (Cont'd)
- .8 Provide for positive drainage of condensation occurring within wall construction and water entering at joints, to exterior face of wall.
 - .9 Design wall system to accommodate erection tolerances of structure.
- 1.4 Submittals
- .1 Shop Drawings
 - .1 Bearing seal and signature of the professional engineer registered in the Province of Nova Scotia responsible for the engineering design of Work of this Section.
 - .2 Submit shop drawings indicating the type of metal wall panels, thicknesses of metal components, size, spacing and location of supports and girts, connections, type and locations of fastenings, sealing, finish and colour.
 - .3 Indicate design loads and spans, sheet lengths and lap locations.
 - .4 Indicate provision for structural and thermal movement between metal cladding and adjacent materials.
 - .5 Submit shop drawings signed and sealed by a professional engineer licensed in the Province of Nova Scotia.
 - .6 Show joint locations where panels are not one piece for the full height.
 - .2 Submit two 300 mm long samples of profiles specified, showing material, thickness, finish and colour.
 - .3 Submit the metal finishers certificate that the coating system provided meets the Specifications.
 - .4 Submit the manufacturer's instructions for installation of materials as required.
- 1.5 Quality Assurance
- .1 Qualifications: Membership in good standing with the Canadian Sheet Steel Building Institute and the Canadian Institute of Steel Construction.
 - .2 Minimum five years proven acceptable experience installing preformed metal panel work on projects of comparable size and scope.
 - .1 Prior to commencement of metal panel construction, submit a list of project names, owners, contacts, dates completed and construction costs.
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1.6 Delivery,
Storage, and
Handling

- .1 Protect finished surfaces from damage.

1.7 Warranty

- .1 Submit a two year warranty from the date of Substantial Performance of the Works for the work of this Section against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 Materials

- .1 Steel Sheet: Commercial quality 0.76 mm minimum, zinc coated (galvanized) in accordance with ASTM A653/A653M coating class Z275.
- .2 Miscellaneous Shapes: CAN/CSA-G40.21 M; galvanized steel, galvanized in accordance with CAN/CSA A164 M, hot-dip galvanizing of 610 g/m² zinc coating.
- .3 Coping counterflashing and flashing closures are to be of the same material and finish as metal panels. Supply coil stock material in accordance with Section 07600.
- .1 Counterflashing, flashing, closure: 0.61 mm galvanized steel sheet.
- .2 Coping: 0.8 mm galvanized steel sheet.
- .4 Girts, Angles, Clips and Other Auxiliary Supports: Fabricated from minimum 1.22 mm thick galvanized steel sheet.
- .5 Concealed Fasteners: Stainless steel for aluminum wall panels, galvanized carbon steel for steel wall panels.
- .6 Exposed Fasteners: Stainless steel for wall panels, with colour matching nylon heads, Colourmate by Northwest Screw Products Ltd., Prisma by Construction Fasteners Inc.
- .7 Isolation Coating: ASTM D1187 Bituminous Coating.
- .8 Touch up Primer: Sealtight Galvafruid Zinc Rich Coating by W.R. Meadows of Canada Ltd.
- .9 Flexible Seals: 1.0 mm thick EPDM or Neoprene sheet and adhesive.

2.1 Materials
(Cont'd)

- .10 Sealant for on Site Sealing: Dymeric 240 by Tremco (Canada) Ltd. Primer: As recommended by sealant manufacturer. Colour of sealant: Of colour similar to predominant material to which sealant is applied and subject to review by the Consultant.
- .11 Joint backing: Closed cell, polyethylene, compatible with sealant and minimum 25 percent oversized.
- .12 Roof Sheathing: 16 mm (5/8
- .13 Roof Insulation: Mineral wool insulation to thickness indicated, RXL 60 by Roxul or FBX 1260 by Fibrex.
- .14 Roof Waterproofing Membrane: Ice and Water Shield by W.R. Grace or other approved equivalents.
- .15 Roof Weather Barrier Membrane: Elastobond Shield by Soprema.

2.2 Fabrication

- .1 Metal wall panel: AD150 by Vicwest Canada.
- .2 Metal Roof Panels: Ultra by Vicwest Canada.
- .3 Start fabrication of metal panels from accepted shop drawings and Site measurements.
- .4 Take Site measurements to ensure that fabrications fit the structure, surrounding construction, around obstructions and projections in place and to suit locations of service.
- .5 Form metal panels to the profiles indicated on the Contract Drawings and in accordance with the manufacturer's directions without face damage or distortion.
- .6 Fabricate panels in one piece to the maximum height shown on the Contract Drawings. Fabricate corners brake formed to required angle.
- .7 Fabricate securement members required for anchorage and attachment of panels to structural framing members for support of panel system.
- .8 Fabricate trim and closures at doors, windows, louvres and similar openings to match panels finish.

- 2.3 Finishes .1 Metal Coating System: Coil-coated, baked-on, silicone polyester coating, system dry film thickness of 25 micron \pm 5 micron WeatherX by Valstar on exposed surfaces. Pretreat and prime surfaces prior to application of coating. Prime and wash coat finish unexposed surfaces.

PART 3 - EXECUTION

- 3.1 Examination .1 Examine structural frame and structure and report unacceptable Site conditions.
- .2 Commencement of Work implies acceptance of Site conditions.

- 3.2 Preparation .1 Coat metal surfaces in contact with concrete, masonry, or dissimilar metals or other cementitious materials with one coat of 1 mm thick DFT minimum, isolation coating.
- .2 Touch up field welds in galvanized steel with two coats zinc chromate primer. 50 micron thick DFT, minimum.
- .3 Provide auxiliary supports and framing as required by substrate conditions.

- 3.3 Installation - Roof Sheathing .1 Mechanically fasten sheathing to steel deck with screws spaced minimum 400 mm oc each way. Provide minimum 12 screws each board.
- .2 Place sheathing with long axis of each sheet transverse to ribs, with end joints staggered and fully supported on ribs. Butt boards together to moderate contact. Adjust spacing so screws are centred on ribs.
- .3 Ensure sheathing is pulled tight with steel deck at each screw.
- .4 Tape joints in sheathing.
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3.4 Installation -
Metal Roof System

- .1 Install waterproofing membrane on roof decks in accordance with recommendations of the membrane manufacturer and in a manner to achieve waterproof integrity of the membrane.
- .2 Fasten Z members and girts through waterproofing membrane to structural supports with self-tapping screws at 300 mm centres and to suit loading requirements.
- .3 Install insulation between girts. Butt each board against adjacent boards, with joints staggered. Fit neatly with tight joints around obstructions, openings and corners. Fill voids behind flashings and trim with neatly cut blocks of insulation.
- .4 Install weather barrier membrane on insulation to manufacturer's recommendations.
- .5 Fasten roof panels to Z members and girts with concealed fasteners where possible and at spacings to suit loading requirements. Ensure complete nesting of exterior siding sheets on Z members and girts and sealed side lap joints.
- .6 Align units end-to-end to provide accurate fit with corresponding sections parallel and straight. Keep exposed fasteners to a minimum. Maintain minimum end overlap of 50 mm and locate directly over supports.

3.5 Installation

- .1 Install steel girts and auxiliary supports required. Secure to structural building frame.
 - .2 Commence installation of preformed metal panels after building frame is completed and permanent bracing and roof and floor diaphragms are in place; and concrete structure has acquired a minimum of 75 percent of design strength.
 - .3 Install metal wall panels in accordance with the manufacturer's instructions and as specified in the Contract Documents.
 - .4 Provide clip angle anchors at 600 mm o.c. maximum. Lock fasteners after setting.
 - .5 Install metal closures, trim, and flashings required to maintain wind and rain tightness of metal wall panels.
 - .6 Supply and erect members required for support and anchorage of wall panel system. Install panels level,
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- 3.5 Installation (Cont'd) .6 (Cont'd)
flat, plumb and true to line..7 Provide jointing in accordance with accepted shop drawings.
- .7 Provide trim, and closures and flashing as required.
- 3.6 Installation - Tolerances .1 Allow for structural building frame deviations and erect systems, plumb, level, and true in correct relation to the Work of other Sections. Erection tolerances for assemblies are related to the structural frame of the building and apply to each individual assembly.
- .1 Vertical position; plus or minus 3 mm.
.2 Horizontal position; plus or minus 3 mm.
.3 Deviation from plumb; 3 mm maximum each plane.
.4 Racking of face; 6 mm maximum.
.5 Racking in elevation; nil.
- 3.7 Installation - Sealants .1 Install flexible seals, tapes and gaskets at locations required to provide a water, air and vapour tight system. Seal at end joints between lengths of material.
- .2 Seal joints between metal wall panels and adjacent surfaces.
- .3 Before application of sealant, clean and dry joints surfaces to be free from extraneous matter which may affect the bond. Prime surfaces.
- .4 Apply sealant in accordance with the manufacturer's printed instructions.
- .5 Pack joints over 6 mm wide with joint backing. Maintain a 2:1 sealant bead width to depth ratio. Mask surfaces where required. Fill joints and tool to concave profile. Clean adjacent materials which have been soiled.
- 3.8 Cleaning .1 Remove excess sealant by the moderate use of mineral spirits or other solvent acceptable to the sealant manufacturer and metal fabricator.
- .2 Where accumulation of dirt does not respond to cleaning required, refer the condition to the Consultant, with recommendations as to remedial action required; do not undertake any cleaning procedure without written acceptance.