

ADDENDUM 9 BID OPPORTUNITY 792-2006

WINNIPEG WATER TREATMENT PROGRAM – CONSTRUCTION OF SODIUM HYPOCHLORITE AND CHEMICAL STORAGE BUILDINGS

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE BID
OPPORTUNITY**

ISSUED: April 24, 2007
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID OPPORTUNITY AND SHALL
FORM A PART OF THE CONTRACT
DOCUMENTS**

Template Version: A20050506

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid may render your Bid non-responsive.

PART E – SPECIFICATIONS

Section 15200-000

Revise: 3.5.10 to read: Supply and install joints as required to accommodate pipe coatings and linings.

Section 15202

Add: 2.8 **Miscellaneous Plumbing Valves**

Add: 2.8.1 **Gate Valves:**

Add: 2.8.1.1 Type V100 Gate Valve 50 mm and Smaller:

Add: 2.8.1.1.1 All-bronze, screwed bonnet, packed gland, single solid wedge gate, nonrising stem, Class 125 rated 1380 kPa CWP, complies with MSS SP-80 Type 1.

Add: 2.8.1.1.2 Manufacturers and Products:

Add: 2.8.1.1.2.1 Crane; Figure 438, NPT threaded ends.

Add: 2.8.1.1.2.2 Stockham; Figure B103, NPT threaded ends

Add: 2.8.1.1.2.3 Crane; Figure 1324, soldered ends.

Add: 2.8.1.1.2.4 Stockham; Figure B104, soldered ends

Add: 2.8.2 **Angle Pattern Valves**

Add: 2.8.2.1: Type V201 Angle Pattern Valve 50 mm and Smaller:

Add: 2.8.2.1.1 All-bronze, NPT threaded ends, union bonnet, packed gland, inside screw, rising stem, TFE disc, Class 150 rated 1035 kPa SWP/2670 kPa CWP, complies with MSS SP-80 Type 2.

Add: 2.8.2.1.2 Acceptable Manufacturers:

Add: 2.8.2.1.2.1 Stockham; Figure B-222T.

- Add: 2.8.2.1.2.2 Crane Co.; Figure 17TF.
- Add: 2.8.3 **Globe Valves**
- Add: 2.8.3.1 Type V210 Globe Valve 75 mm and larger:
- Add: 2.8.3.1.1 Iron body, bronze mounted, flanged ends, bronze seat, outside screw and yoke, bolted bonnet, Class 125 rated 860 kPa SWP/1380 kPa CWP, complies with MSS SP-85 Type 1.
- Add: 2.8.3.1.2 Acceptable Manufacturers:
- Add: 2.8.3.1.2.1 Stockham; G-512.
- Add: 2.8.3.1.2.2 Crane; Figure 351.
- Add: 2.8.3.2 Type V236 Globe Valve 65 mm and smaller:
- Add: 2.8.3.2.1 All bronze, NPT threaded ends, inside screw-type rising stem, TFE disc, complies with MSS SP-80, rated 2670 kPa CWP.
- Add: 2.8.3.2.2 Acceptable Manufacturers:
- Add: 2.8.3.2.2.1 Stockham; Figure B-22T.
- Add: 2.8.3.2.2.2 Crane Co.; Cat. No. 7TF.
- Add: 2.8.3.2.2.3 Nibco; Figure T-235-Y.
- Add: 2.8.4 **Butterfly Valves**
- Add: 2.8.4.1 Type V513 Butterfly Valve 50 mm and larger:
- Add: 2.8.4.1.1 Wafer style, cast iron body, aluminum bronze or Type 316 stainless steel disc, Type 316 or 18-8 stainless steel one-piece stem, EPDM replaceable resilient seat, heavy-duty self-lubricating sleeve type bushings, NBR stem seal, 1035 kPa working pressure rating, valve body to fit between ANSI Class 125/150 flanges.
- Add: 2.8.4.1.2 Acceptable Manufacturers:
- Add: 2.8.4.1.2.1 Bray Controls; Series 30.
- Add: 2.8.4.1.2.2 Tyco/Keystone; Model AR1/AR2.
- Add: 2.8.4.1.2.3 Crane/Centerline; Series 200.
- Add: 2.8.5 **Check Valves**
- Add: 2.8.5.1 Type V604 Check Valve 63 mm to 300 mm:
- Add: 2.8.5.1.1 Flanged end, cast iron body, bronze mounted swing type, solid bronze hinges, stainless steel hinge shaft, rated 862 kPa SWG, 1380 kPa WOG.
- Add: 2.8.5.1.2 Acceptable Manufacturers:
- Add: 2.8.5.1.2.1 Stockham G-931; List 37, Clearway check valve.
- Add: 2.8.5.1.2.2 Crane Co.; Cat. No. 373.

- Add: 2.8.6: **Flap Valves**
- Add: 2.8.6.1 Type V695 Flap Valve 150 mm to 450 mm:
- Add: 2.8.6.1.1 Flap valve for installation on end of pipe to prevent water backup, tight sealing, cast iron or fabricated 316 stainless steel body, brass or 316 stainless steel hinge bar, bearing washers and cotter pins, Class 125 flanged or compression style end connection, resilient seat, 316SS fasteners, neoprene gasket, Manufacturer's standard corrosion resistant epoxy coating.
- Add: 2.8.6.1.2 Acceptable Manufacturers:
- Add: 2.8.6.1.2.1 Waterman.
- Add: 2.8.6.1.2.2 Clow.
- Add: 2.8.6.1.2.3 Fontaine.

Section 17600-A(R2)

Revise the following rows of the PCL I/O Index:

			DESCRIPTION		I/O SPECIFICATION								
RECORD NO.	REV. NO.	TAG NAME	FUNCTION	SERVICE	P&ID DRAWING	ENG. UNITS	SCALE		ALARMS		PLC CABINET	I/O TYPE	I/O ADDRESS
							LOW	HIGH	LOW	HIGH			
0276	3	LA-S260C	Level Alarm	Bulk Sulphuric Acid Containment High Level Visual Alarm	WS-P0002						LCP-S11	DO	
0277	3	LA-S260D	Level Alarm	Bulk Sulphuric Acid Containment High Level Visual Alarm	WS-P0002						LCP-S11	DO	
0405	3	LA-S190D	Level Alarm	Bulk Ferric Chloride Containment High Level Visual Alarm	WS-P0005						LCP-S11	DO	
0552	3	LA-S371D	Level Alarm	Sodium Hydroxide Containment Visual High Level Alarm	WS-P0009						LCP-S11	DO	

Section 17700-A(R2)

Clarification: With reference to the Tork Alert level alarms: For audible alarms use a Tork Alert TA-140N5 electronic horn and for the visual alarms use a Tork Alert TA52 rotating beacon (or similar).

Revise the Comments column of Record Nos. 0218, 0224, 0231 and 0237 to read: head mounted transmitter with indicator.

For Record Nos. 0263, 0264, 0265, 0266, 0267, 0268, 0271, 0272, 0273, 0274, 0275 and 0276: Add I120 to the Spec Data Sheet column

Revise Record Nos. 0155, 0199, 0253 and 0259 (tag numbers have been revised) and add Record No. 0297, 0298 and 0299 as follows:

Bid Opportunity 792-2006-Addendum 9 - INSTRUMENT INDEX REVISIONS AND ADDITIONS TO SECTION 17700-A(R2)

RECORD NO.	REV. No.	TAG NAME	DESCRIPTION		MANUFACTURER	MODEL	POWER SUPPLY	CALIBRATED RANGE	MOUNTING	INSTALLED		COMMENTS	SPEC. DATA SHEET	P&ID DRAWING	INSTRUMENT LOOP DIA.	INSTALLATION DETAIL	LOCATION DWG.
			INSTRUMENT TYPE	SERVICE						SUPPLIED BY	BY						
0155	3	LA-S260C	Level Alarm	Bulk Sulphuric Acid Containment High Level Visual Alarm			120VAC			Contractor	Contractor	Warning lamp mounted outside room above door		WS-P0002			
0199	3	LA-S190C	Level Alarm	Bulk Ferric Chloride Containment High Level Visual Alarm			120VAC			Contractor	Contractor	Warning lamp mounted outside room above door		WS-P0006			
0253	3	LA-S371C	Level Alarm	Bulk Sodium Hydroxide Containment High Level Visual Alarm			120VAC			Contractor	Contractor	Warning lamp mounted outside room above door		WS-P0009			
0259	3	LI-S420C	Remote Indicator	Bulk Ammonia Storage Tank TK-S420A Level					Panel	Contractor	Contractor	Loop powered 3 digit		WS-P0012			
0297	3	LA-S260D	Level Alarm	Bulk Sulphuric Acid Containment High Level Visual Alarm			120VAC			Contractor	Contractor	Warning lamp mounted outside room above door		WS-P0002			
0298	3	LA-S190D	Level Alarm	Bulk Ferric Chloride Containment High Level Visual Alarm			120VAC			Contractor	Contractor	Warning lamp mounted outside room above door		WS-P0006			
0299	3	LA-S371D	Level Alarm	Bulk Sodium Hydroxide Containment High Level Visual Alarm			120VAC			Contractor	Contractor	Warning lamp mounted outside room above door		WS-P0009			

DRAWINGS

The following drawing has been added for information only and forms part of this Addendum:

<u>Consultant Drawing No.</u>	<u>City Drawing No.</u>	<u>Drawing Title</u>
WF-M0122	1-0601F-A-M0122-001-01D	Process Mechanical – Filtration Area 2 – Upper Channel Plan

The following drawings have been revised and form part of this Addendum:

<u>Consultant Drawing No.</u>	<u>City Drawing No.</u>	<u>Drawing Title</u>
WS-A0110	1-0601S-A-A0110-001-02D	Automation/I&C – Instrument Location Plan – Lower Level
WS-A0125	1-0601S-A-A0125-001-02D	Automation/I&C – Instrument Location Plan – Upper Level
WS-P0002	1-0601S-G-P0002-001-02D	Process – Sulphuric Acid Feed System 1 of 2 – Process and Instrumentation Diagram
WS-P0005	1-0601S-G-P0005-001-03D	Process – Ferric Chloride Feed System 1 of 3 – Process and Instrumentation Diagram
WS-P0009	1-0601S-G-P0009-001-02D	Process – Sodium Hydroxide Feed system 1 of 3 – Process and Instrumentation Diagram

Clarification: With reference to drawing WF-M0122 added “for information only” in this Addendum and the drawings added “for information only” in Addendum 8: these drawings are intended to be used to determine the extent of heat tracing to be supplied and installed by the Contractor on CS piping that will be supplied and installed by the City in the main WTP. The Contractor shall heat trace the CS piping from the metering pump skid to the dosing point shown on WF-M0111 along gridline BA between gridlines B3 and B4.

Clarification: With reference to drawing WJ-E0522, panel LP-J12, circuits 1, 3 and 5: Revise breaker size to 50A-3P.

Clarification: With reference to the Automation/I&C Cable Schedule: On page 2 of 8, revise the cable Type associated with Tag # LCP-J500A to read “9C/AWG 14”.

Clarification: With reference to drawing WS-H0503: FE-S710A and FT-S710A shall be Omega Instruments FTB-907 turbine flowmeter complete with 4-20mA output signal conditioner FLSC-60 (or similar).

Clarification: With reference to compressed air and chemical offloading, arm lengths can be calculated from the dimensions given between Gridlines SB and SC, which equates to approximately 5 metres. Exact dimensions will be confirmed during shop drawing review. Steam and Condensate hose lengths can also be calculated using the dimensions given between grid lines from the mechanical room to the centre of the rail car, assume an 8 metre length, these flex hoses are to be 50 diameter with quick connection and be rated for LPS and LPC service.

Clarification: With reference to the Chemical Building parapets (except for Grid Line SA), the parapet miscellaneous framing construction shall be as follows:

- Vertical C100 channels are welded to each building column, complete with weld plates, at maximum 6100 mm on center; the lengths of the vertical channels vary to accommodate the architectural detailing
- Horizontal C100 channels are welded in between the verticals at 300 mm on center and at the top to support the architectural finishes; where verticals are more than 4000 mm apart, a sag member is required

Clarification: With reference to the Sodium Hypochlorite Building parapets (except for Grid Line SA), the parapet miscellaneous framing construction shall be as follows:

- Size and spacing of vertical channel: C100x8@1000 O/C
- Horizontal angles: 51x51x6.4
- Bottom angle: 152(H)x102x7.9