

# 611-2005 ADDENDUM No 1

NORTH END WATER POLLUTION CONTROL CENTRE CENTRATE NUTRIENT TREATMENT – PHOSPHORUS REMOVAL FACILITY PROJECT

# **URGENT**

PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID OPPORTUNITY ISSUED: January 13, 2006 BY: Eric Hutchison P.Eng TELEPHONE NO. (204) 477-5381

THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID OPPORTUNITY AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS

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 D – SUPPLEMENTAL CONDITIONS

Revise D12.1 to read: The Contractor shall achieve Substantial Performance by October 20, 2006.

Revise D13.1 to read: The Contractor shall achieve Total Performance by November 8, 2006.

## PART E - SPECIFICATIONS

Section 01061 DELETE SECTION

Section 01500 Clause 1.1.2 REVISE TO READ

"Provide and maintain in clean condition during entire progress of the Work, a suitable office adequately lighted, heated, and ventilated, for own use and complete with a finished meeting space suitable for Contractor, City and Contract Administrator representatives to meet on site."

Section 02450 ADD CLAUSE 2.6 Ancillary Items

2.6.1 Supply Nolan model BFP standard staff which can be padlocked in the up or down position.

2.6.2 Supply Nolan standard blue flag BF-3 "Stop – Tank Car Connected"

2.6.3 Supply two Nolan Model WC-1 Single Chocks with handle.

Section 07620 ADD CLAUSE 1.1.4 Rain Water Leaders

Section 07620 ADD CLAUSE 2.1.3 Prefinished galvanized Brake Metal: ASTM A446; G90 zinc coating; 16 gauge core steel; shop precoated; Colour as per schedule or as specified by the Contract Administrator. Bid Opportunity No. 611-2005 Addendum No 1 Page 2 of 7

Section 07620 Clause 2.1 ADD CLAUSE 2.1.4 Prefinished galvanized Open Faced Rain Water Leaders: ASTM A446; G90 zinc coating; 22 gauge core steel; shop precoated; Colour as per schedule as specified by the Contract Administrator. 150mm typical.

Section 08360 Clause 2.2.2.4 REVISE TO READ "End Stiles: 16 Gauge (Double)."

Section 08360 Clause 2.2.6 REVISE TO READ "Lock: Interior mounted slide lock c/w interlock switch."

Section 08360 Clause 2.2.9 REVISE TO READ "Manual Operation: None."

Section 08360 Clause 2.2.12 REVISE TO READ "Hardware to be c/w Pusher Springs."

Section 09900 Clause 1.2.6 DELETE CLAUSE

Section 09900 Clause 1.2.10 REVISE TO READ "Process Piping: Section 11050"

Section 11315 Clause 2.11.4.3 REVISE TO READ "One multifunction drive control key pad."

Section 11315 Clause 2.11.4.4 DELETE CLAUSE

Section 11315 Clause 2.11.4.5 DELETE CLAUSE

Section 11990 Clause 4.2.1.18. REPLACE the pressure value of 120 kPa with 70 kPa, and replace the pressure value of 240 kPa with 103 kPa

Section 15010 Clause 1.4 DELETE CLAUSE

Section 15010 Clause 1.17.11 REVISE TO READ "Minimum certified motor efficiency shall be as outlined in Manitoba Hydro's latest high efficiency motor incentives program."

Section 15010 Clause 1.17.11 DELETE Minimum Efficiency Table

Section 15010 Clause 1.21.5 REVISE TO READ "Identify piping with labels, colour bands, and flow arrows. Provide identification at <u>3 m</u> maximum intervals, before and after pipes pass through walls, at all sides of tees, behind access doors and in equipment rooms as required."

Section 15010 Clause 1.21.12 DELETE CLAUSE

Section 15010 Clause 1.26.5 ADD "McQuay" to "Coils - Heating and Cooling" ADD "Ventex" to "Louvres" ADD "McQuay" to "Makeup Air Units - Packaged Indirect or Direct Fired" Bid Opportunity No. 611-2005 Addendum No 1 Page 3 of 7

Section 15010 Clause 1.27 DELETE CLAUSE

Section 15010 Clause 1.28 DELETE CLAUSE

Section 15010 Clause 1.29 DELETE CLAUSE

Section 15010 Clause 1.30 DELETE CLAUSE

Section 15010 Clause 1.31 DELETE CLAUSE

Section 15020 ADD CLAUSE 3.5.6 Provide two (2) working days for demonstration of equipment to the City

Section 15030 Clause 1.1.5 DELETE CLAUSE

Section 15030 Clause 1.1.6 DELETE CLAUSE

Section 15030 Clause 1.1.7 DELETE CLAUSE

Section 15030 Clause 1.1.10 DELETE CLAUSE

Section 15090 Clause 2.2.1 DELETE CLAUSE

Section 15130 Clause 2.3.1

REVISE CLAUSE TO READ "Glycol feed tank shall include storage mixing tank with level gauge; pump suction hose with inlet strainer; pressure pump with fuse protection; integral low fluid cut-out switch; integral check valve; power supply adapter; manual diverter valve for purging air and agitating contents of storage tank; pressure switch with two sets of SPST contacts, each adjustable from 55 kPA (8 psig) to 175 kPa (18 psig) cut-out pressure; 6 mm FPT connection. Power supply 115 V, 1 phase, 60 Hz to 24 VDC 50 W."

Section 15130 Clause 2.3.5 DELETE CLAUSE

Section 15200 Clause 2.2.5.2 REVISE TO READ "0.4 mm <u>embossed</u> aluminum sheet for piping where specified."

Section 15200 Clause 3.3 REVISE "Canvas" to read "Painted Canvas, PVC or Aluminum"

Section 15210 Clause 2.1.3.2 & 2.1.3.3 REVISE TO READ "0.9 mm <u>embossed</u> aluminum sheet for exterior duct work and where subject to damage."

Section 15210 Clause 3.3 REVISE "Canvas" to read "Painted Canvas"

Section 15420 Clause 2.1 REVISE TO READ "Combination Emergency Shower & Eyewash (W-702-EW-1 & W-702-EW-2)" Bid Opportunity No. 611-2005 Addendum No 1 Page 4 of 7

Section 15420 Clause 2.2 REVISE "EW-1" TO READ "Combination Emergency Shower & Eyewash".

Section 15420 Clause 3.2 REVISE "EW-1" TO READ "Combination Emergency Shower & Eyewash".

Section 15420

ADD CLAUSE

2.4 Combination Emergency Shower & Eyewash (W-702-EW-3)

2.4.1 Eyewash: barrier-free floor mounted combination shower and eye/face wash with 250 mm (10 inch) ABS plastic shower head with integral 75.7 L/min (20 gpm) and twin ABS plastic eye/face wash heads with built-in 9.5 L/min (2.5 gpm) flow control with integral flip top dust cover, 32 mm (1.25 inch) IPS supply, combination emergency shower and eyewash sign, high-visibility stripe, cast-iron 230 mm (9 inch) diameter floor mount flange, 'Test This Week' waterproof test card. Standard of Acceptance: Haws Model No. 8317.

Section 15816 Clause 2.1.1 DELETE CLAUSE

Section 15900 Clause 3.2.3

REVISE TO READ "Interlock with CO monitoring system to operate ventilation system on high volume when detected CO concentration has reached the pre-determined "warning" level."

Section 15900 Clause 3.2

ADD CLAUSE

3.2.4 Interlock CO monitor system to shut down MAU when detected CO concentration has reached the predetermined "alarm" level.

Section 15900 Clause 3.3.3

REVISE CLAUSE TO READ "Interlock with CO monitoring system to operate ventilation system on high volume when detected CO concentration has reached the pre-determined "warning" level."

Section 15900, Clause 3.3

ADD CLAUSE

3.3.5 Interlock CO monitor system to shut down MAU when detected CO concentration has reached the predetermined "alarm" level.

Section 15900 Clause 3.4

ADD CLAUSE

- 3.4 Sequence of Operation Heat Reclaim System
- 3.4.1 The Chemical Storage Building heat reclaim system shall provide heat recovery from the ventilation system.
- 3.4.2 The heat reclaim circulation pump, W-797-P shall be energized upon the space temperature dropping below 20 degrees C and the outside air temperature dropping below 15 degrees C.
- 3.4.3 The 3-way control valve at the Preheat Coil, PHC-1 shall have dual function. It shall modulate to limit the maximum supply air temperature to the Chemical Storage Building space to 20 degree C and it shall also modulate to limit the minimum entering glycol temperature into the Heat Reclaim Coil, HRC-1 to 0 degrees C to provide frost control at this coil."
- 3.4.4 Upon the outside air temperature rising above 15 degrees C the circulation pump W-797-P shall be deenergized.

Section 15990

REVISE Section Title "GENERAL MECHANICAL PROVISIONS" to read "TESTING, ADJUSTING AND BALANCING (TAB)"

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Section 15999 Clause 1.1 REPLACE Air Handling Unit Schedule

Tag	W-795-MAU	W-790-MAU
Location	Chemical Building	Rail Car Shelter
Area Served	Chemical Building	Rail Car Shelter
Туре	Direct fired	Direct Fired
Manufacturer	ICE	ICE
Model	BMA 112	BMA115
Supply Fan		
Tag		
Volume, L/s (cfm)	1215 (2577)	1975 (4181)
ESP, Pa (in wg)	185 (0.75)	185 (0.75)
Fan Type	Belt	Belt
Fan Size, mm (in)	300-300 (12-12)	375-375 (15-15)
Motor Power, kW (hp)	2.25 (3)	3.75 (5)
Power Supply, V/Ph/Hz	600/3/60	600/3/60
Return Fan		/
Tag		
Volume, L/s (cfm)		
ESP, Pa (in wg)	<b>┐</b> /	
Fan Type	٦ /	
Speed rpm	7	
Motor Power, kW (hp)	7 /	
Power Supply	$\neg$	
Minimum Outdoor Air, L/s (cfm)	608 (1289)	988 (2092)
Heating Section		
Туре	Natural Gas	Natural Gas
Gas Input, kW (MBH)	73.3 (250)	107 (366)
Heating Output kW (MBH)	73.3 (250)	107 (366)
Temperature rise °C (°F)	50 (90)	45 (81)
Pre-heat Coil	See PHC-1	
Tag	/	
Size, H x L, mm (in)	- /	
Face Area, $m^2$ (ft <sup>2</sup> )	- /	
Rows / fpi	- /	
Face Velocity m/s (fpm)	- /	
Air side P.D. Pa (in wg)	- /	
Htg. Capacity, kW (MBH)	- /	
EAT DB/WB, °C (°F)	$\neg$	
LAT DB/WB, °C (°F)		
	$\neg$	
	-/	
Condensing Unit	-/	/
Condensing Unit No. of Cond. Fans		
Condensing Unit No. of Cond. Fans Cond. Fan Power, kW (hp)		
Condensing Unit No. of Cond. Fans Cond. Fan Power, kW (hp) No. of Compressors		
Condensing Unit No. of Cond. Fans Cond. Fan Power, kW (hp) No. of Compressors Power Supply	654	0.04
Condensing Unit No. of Cond. Fans Cond. Fan Power, kW (hp) No. of Compressors Power Supply Minimum Circuit Ampacity	6.5A Horizontal Unit	9.0A Vartical Unit
Condensing Unit   No. of Cond. Fans   Cond. Fan Power, kW (hp)   No. of Compressors   Power Supply   Minimum Circuit Ampacity   Arrangement	Horizontal Unit	Vertical Unit
Condensing Unit   No. of Cond. Fans   Cond. Fan Power, kW (hp)   No. of Compressors   Power Supply   Minimum Circuit Ampacity   Arrangement   Supply Outlet		
Condensing Unit   No. of Cond. Fans   Cond. Fan Power, kW (hp)   No. of Compressors   Power Supply   Minimum Circuit Ampacity   Arrangement   Supply Outlet   Return Inlet	Horizontal Unit Bottom	Vertical Unit Top
Condensing Unit No. of Cond. Fans Cond. Fan Power, kW (hp) No. of Compressors Power Supply Minimum Circuit Ampacity Arrangement Supply Outlet Return Inlet Outdoor Air Inlet	Horizontal Unit	Vertical Unit
Condensing Unit No. of Cond. Fans Cond. Fan Power, kW (hp) No. of Compressors Power Supply Minimum Circuit Ampacity Arrangement Supply Outlet Return Inlet Outdoor Air Inlet Relief Air Outlet	Horizontal Unit Bottom	Vertical Unit Top
Condensing UnitNo. of Cond. FansCond. Fan Power, kW (hp)No. of CompressorsPower SupplyMinimum Circuit AmpacityArrangementSupply OutletReturn InletOutdoor Air InletRelief Air OutletPhysical Data	Horizontal Unit Bottom End	Vertical Unit Top Right
Condensing UnitNo. of Cond. FansCond. Fan Power, kW (hp)No. of CompressorsPower SupplyMinimum Circuit AmpacityArrangementSupply OutletReturn InletOutdoor Air InletRelief Air OutletPhysical DataOverall Length, mm (in)	Horizontal Unit Bottom End 4800 (184)	Vertical Unit Top Right 762 (30)
Condensing UnitNo. of Cond. FansCond. Fan Power, kW (hp)No. of CompressorsPower SupplyMinimum Circuit AmpacityArrangementSupply OutletReturn InletOutdoor Air InletRelief Air OutletPhysical DataOverall Length, mm (in)Overall Width, mm (in)	Horizontal Unit Bottom End 4800 (184) 1372 (54)	Vertical Unit Top Right 762 (30) 1473 (58)
Condensing UnitNo. of Cond. FansCond. Fan Power, kW (hp)No. of CompressorsPower SupplyMinimum Circuit AmpacityArrangementSupply OutletReturn InletOutdoor Air InletRelief Air OutletPhysical DataOverall Length, mm (in)	Horizontal Unit Bottom End 4800 (184)	Vertical Unit Top Right 762 (30)

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Section 15999 Clause 1.7 REVISE Pump Schedule, tag numbering for P-1, P-2 & P-3 to read W-702-P1, W-702-P2 & W-797-P respectively.

Section 15999 Clause 1.7 REVISE Function of W-797-P to read "Heat Reclaim Pump" instead of "DHW circulating pump."

Section 16122 ADD Table "Cable Schedule"

Section 16122 ADD Table "Control Cable Schedule"

Section 16721 Clause 3.1.11 REVISE TO READ "Connect remote fire alarm output to System Marshalling Panel (Sludge Dewatering Building) and extend to D.C.S. –PCU 26 as indicated in Section 17702 Drawing ILD-11."

Section 17600 Clause 1.2 REPLACE Table "DCS INPUT/OUTPUT INDEX" with revised Table.

# PART E – DRAWINGS

#### Drawing 1-0101F-A-B0001-001-00-D

Replace with the revised Drawing 1-0101F-A-B0001-001-01-D

## Drawing 1-0101F-A-B0002-001-00-D

Replace with the revised Drawing 1-0101F-A-B0002-001-01-D

#### Drawing 1-0101F-A-B0003-001-00-D

Replace with the revised Drawing 1-0101F-A-B0003-001-01-D

#### Drawing 1-0101F-A-B0004-001-00-D

Replace with the revised Drawing 1-0101F-A-B0004-001-01-D

#### Drawing 1-0101F-A-B0005-001-00-D

Replace with the revised Drawing 1-0101F-A-B0005-001-01-D

#### Drawing 1-0101F-A-B0006-001-00-D

Replace with the revised Drawing 1-0101F-A-B0006-001-01-D

#### Drawing 1-0101F-A-B0007-001-00-D

Replace with the revised Drawing 1-0101F-A-B0007-001-01-D

#### Drawing 1-0101F-A-B0008-001-00-D

Replace with the revised Drawing 1-0101F-A-B0008-001-01-D

#### Drawing 1-0101F-G-P0001-001-00-D: Process, Process Flow Diagram Replace with the revised Drawing 1-0101F-G-P0001-001-01-D

#### Drawing 1-0101F-A-P0001-001-00-D: Process, Railcar Shelter, Plan and Sections Replace with the revised Drawing 1-0101F-A-P0001-001-01-D

**Drawing 1-0101F-A-P0003-001-00-D: Process, Chemical Storage Building, Sections.** Replace with the revised Drawing 1-0101F-A-P0003-001-01-D

## Drawing 1-0101F-D-P0003-001-00-D: Process, Pump Skid Details

Replace with the revised Drawing 1-0101F-D-P0003-001-01-D

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Drawing 1-0101F-H-A0001-001-00-D: Instrumentation, Chemical Receiving, Process and Instrumentation Diagram Replace with the revised Drawing 1-0101F-H-A0001-001-01-D

Drawing 1-0101F-H-A0002-001-00-D: Instrumentation, Chemical Storage and Containment, Process and Instrumentation Diagram

Replace with the revised Drawing 1-0101F-H-A0002-001-01-D

Drawing 1-0101F-H-A0003-001-00-D: Instrumentation, Chemical Feed Pump, Process and Instrumentation Diagram

Replace with the revised Drawing 1-0101F-H-A0003-001-01-D

Drawing 1-0101F-D-E0001-001-00-D: Electrical, Panel, Lighting and Motor Schedules

Replace with the revised Drawing 1-0101F-D-E0001-001-01-D

Drawing 1-0101F-A-M0001-001-00-D

Replace with the revised Drawing 1-0101F-A-M0001-001-01-D

## Drawing 1-0101F-A-M0004-001-00-D

Replace with the revised Drawing 1-0101F-A-M0004-001-01-D

## Drawing 1-0101F-G-M0001-001-00-D

Replace with the revised Drawing 1-0101F-G-M0001-001-01-D

#### Drawing 1-0101F-D-M0003-001-00-D

Replace with the revised Drawing 1-0101F-D-M0003-001-01-D

#### Drawing 1-0101F-H-A0004-001-00-D

Replace with the revised Drawing 1-0101F-H-A0004-001-01-D

#### **Drawing ILD-05**

Replace with the revised Drawing ILD-05 Revision 1

#### **Drawing ILD-09**

Replace with the revised Drawing ILD-09 Revision 1