



21-2006 ADDENDUM 3

WEST END WATER POLLUTION CONTROL CENTRE BIOLOGICAL NUTRIENT REMOVAL UPGRADE

URGENT

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

ISSUED: May 29, 2006
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE BID OPPORTUNITY AND SHALL
FORM A PART OF THE CONTRACT
DOCUMENTS**

Template Version: A20050301

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 02220 Revise: Clause 3.4.1 to read: Submit plans for shoring, bracing, sheet piling, and related structural work, sealed and signed by a qualified Professional Engineer registered in the Province of Manitoba in accordance with Section 01300. The Professional Engineer retained by the Contractor for sealing of the plans shall review the shoring at critical stages and certify in writing to the Contract Administrator that the related construction meets the requirements of his or her design.
- Section 03200 Add: Clause 2.1.2 to read: MMFX dowels in Area S as manufactured by MMFX Steel Corporation of America with minimum yield strength of 758 MPa.
- Section 03250 Add: Clause 2.1.16 to read: Anchoring adhesive: SikaFlex 3 CA injectable anchoring gels for grouting of reinforcing steel and MMFX dowels unless noted otherwise.
- Section 04160 Revise: Clause 2.1.2 to read: Wire reinforcement: to CSA A371 and CSA-G30.3, truss type, A.S.W.G. No. 9, galvanized.
- Section 04160 Add: Clause 3.1.5 to read: Provide truss type horizontal joint reinforcement every second course.
- Section 06530 Delete: Clause 2.5.8
- Section 09985 Add: Clause 3.2.9 to read: Prior to application of the coating and related testing the concrete substrate that was wetted by the Site's secondary effluent shall be cleaned. The cleaning process is as follows:
- .1 Pressure wash substrate using potable water.
 - .2 After pressure washing, apply Surface Cleaner 3 as manufactured by Carboline to remove any contaminants, scrubbing surface as required. Apply Surface Cleaner 3 in accordance with manufacturers written instructions.
 - .3 Once contaminants have been removed, pressure wash the substrate with potable water.
- Section 09985 Revise: Clause 3.5.3 to read: Test equipment for proper mixing proportion prior to application of coating following manufacturer's written instructions.

- Section 09985 Revise: Clause 2.3.7.2 Coating Option to read:
- .2 Coating Option:
 - .1 F = Polybrid 705, 80 mils DFT. Polybrid 705 as manufactured by Carboline.
- Section 11050 Add: Clause 1.4.8 to read: Not all small bore piping and valves (<75 mm) are shown on the general arrangement Drawings. Refer to P&ID Drawings, piping schematics, and Standard Details for small-bore piping requirements.
- Section 11050 Add: Clause 1.4.9 to read: As-Constructed information on Drawings may not be accurate. Contractor to confirm exact location of existing piping.
- Section 11055 Revise: Clause 1.2.1 Replace "POL Polymer" with "MP Mixed Polymer"
- Section 11055 Revise: Clause 1.2.1 Add "PD Process Drain, PVC (Sched80)"
- Section 11055 Revise: Clause 1.2.1 Replace "IA Instrument Air" with "IAS Instrument Air Supply"
- Section 11055 Revise: Page 3 of 14 Replace "FC / POL / PO" with "FC / MP / PD / PO"
Replace "Polymer Solution POLY" with "Mixed Polymer MP"
Add "Process Drain PD"
- Section 11055 Revise: Page 5 of 14 and Page 6 of 14 Replace "DSUB" with "SUB"
- Section 11055 Revise: Page 10 of 14 Replace "PSL" with "PS"
- Section 11055 Revise: Page 11 of 14 Replace "IA" with "IAS"
- Section 11058 Revise: Clause 2.1.2 Replace "Grinnell" with "Anvil (formerly Grinnell)"
- Section 11105 Revise: Valve Cross-reference Summary Replace "PV01" with "BV05"
- Section 11105 Revise: Valve Cross-reference Summary Replace "PV04" with "BV05"
- Section 11105 Revise: Replace all references to "Section 15100" with "Section 11100"
- Section 11105 Revise: Page 13 of 39 BV05 Revise Typical Service to read "ELW, FSU, FSL, PS, SUB, WAS, RAS"
- Section 11105 Revise: Page 13 of 39 BV05 Revise "Size Range" to read "Greater than 75 mm"
- Section 11105 Revise: Page 14 of 39 BV06 Replace "POL" with "MP"
- Section 11105 Revise: Page 15 of 39 BV07 Replace "POL" with "MP"
- Section 11105 Revise: Page 17 of 39 CV02 Replace "PSL" with "PS"
- Section 11105 Revise: Page 18 of 39 CV03 Replace "POL" with "MP"
- Section 11105 Delete: Delete Page 24 of 39 GV02
- Section 11105 Delete: Delete Page 26 of 39 MV01
- Section 11105 Revise: Page 27 of 39 NV01 Typical Service Add "Seal Water"
- Section 11105 Revise: Page 29 of 39 PRV01 Typical Service Add "Seal Water"
- Section 11105 Revise: Page 33 of 39 PSV01 Replace "POL" with "MP"

- Section 11105 Revise: Page 37 of 39 SV01 Delete references to "Note 2"
- Section 11306A Revise: Change Tag Number "S220-P" to "S230-FWP"
- Section 11315 Revise: Clause 2.5.2 Delete "flanged"
- Section 11315 Revise: Clause 2.8.1 Replace "Sections 15050, 15051, and 15055" with "Sections 11050, 11051, 11055"
- Section 11315 Revise: Clause 2.8.2 Replace "Sections 15056, 15100, and 15105" with "Sections 11056, 11100, 11105"
- Section 11319A Revise: Replace Tag Numbers "TXXX-P, TXXX-P" with "H410-STP, H420-STP"
- Section 11471 Revise: Delete Clause 2.11; conditioning systems are not required for DAF pressurization systems.
- Section 11521 Add Clause 2.6.16 Design drive components to withstand a continuous torque 200 percent of the continuous operating torque described in 2.6.7.3
- Section 11521 Revise: Clause 2.9.9 to read: All components of each sludge thickening and collection arm mechanism shall be designed to withstand a continuous torque of 200 percent of the continuous operating torque described in 2.6.7.3, while maintaining structural steel stresses within the AISC allowable stress.
- Section 11521 Revise: Clause 2.10.5 to read: Subject to the 600 mm clearance condition described in Clause 2.10.1 being met, terminate the pickets 500 mm below high water level, except where interference would occur.
- Section 11771 Revise: Clause 2.2.4 to read: Fluid Dynamics (Semplex)
- Section 11851 Revise: Clause 1.1.1 delete "and temperature"
- Section 11851 Clarification: Clause 2.3.1.5 indicates the temperature range at which the device must function.
- Section 11851 Revise: Clause 2.1.1 Revise to read: A nutrient analysis system receives treated final effluent (FE) from the secondary clarifier effluent channel for analysis of ammonia, nitrate, ortho-phosphorus, and pH.
- Section 11851 Revise: Clause 1.1.2 delete "cross flow ultra-filter"
- Section 11851 Revise: Clause 2.6, 2.6.1, and 2.6.2 replace "filter" with "strainer"
- Section 11851 Revise: Clause 2.9.4 to read: Equip the control system with an operator interface unit and display screen to display operating status, analysis results, operational commands, and other information required to operate and control the system
- Add: Section 11952 - Miscellaneous Specialty Items – Spray Systems
- Section 13501 Revise: Clause 2.3.10.4 to read: Manway - one 900 mm FF flange
- Section 15100 Delete: Clause 2.1.7
- Section 15100 Delete: Clause 2.2.7
- Section 15110 Delete: Clause 2.2

- Section 15830 Add: Clause 2.1.2.6 All supply ducting shall be designed and constructed to meet SMACNA standards for 4" w.c. (1000 Pa) static pressure class and sealed accordingly.
- Section 15830 Add: Clause 2.1.7 Exhaust duct designated on the drawings as Foul Air Exhaust shall have all joints welded. Or alternatively, the Foul Air Exhaust ducting shall be round type 304 stainless steel spiral lock seam ducting with welded end joints.
- Section 15830 Add: Clause 2.1.8 Exhaust duct designated on the drawings as General Exhaust shall be designed to - 6.0" w.c. (-1493 Pa) pressure class standards. Exhaust duct designated as Foul Air Exhaust shall be designed to -10.0" w.c. (-2500 Pa) pressure class standards.
- Section 15830 Add: Clause 3.3.6 Exhaust duct designated as General Exhaust shall be sealed and tested for less than 0.5 percent leakage rate. Duct shall be sealed to -6.0" w.c. (-1493 Pa) pressure class standards.
- Section 15999 Clarification of Schedule 1.1: Make-up Air Unit Schedule: Observe additional supply and exhaust fan tagging, and unit conversions. Make-up air unit supply and exhaust fans have the same three (3) digit equipment number as the unit they are located in.

<u>MUA TAG</u>	<u>SF TAG</u>	<u>SF</u> <i>l/s (cfm)</i> <i>kW (HP)</i>	<u>EF TAG</u>	<u>EF</u> <i>l/s (cfm)</i> <i>kW (HP)</i>
F600-MUA	F600-SF	2775 (5880) 5.6 (7.5)	F600-EF	2775 (5880) 5.6 (7.5)
S750-MUA	S750-SF	10383 (22000) 14.9 (20.0)	S750-EF	10383 (22000) 14.9 (20.0)
T600-MUA	T600-SF	3166 (6708) 7.5 (10.0)	T600-EF	3166 (6708) 5.6 (7.5)
T605-MUA	T605-SF	1974 (4182) 5.6 (7.5)	T605-EF	1974 (4182) 3.7 (5.0)

- Section 15999 Revise: Schedule 1.6 Pump Schedule, pg 29 of 41, second table, item line "Motor Power HP (kW)" to read "Motor Power kW (HP)."
- Section 15999 Delete: Schedule 1.9 Air Compressor Schedule
- Section 15999 Add: New Schedule:

1.17 Control Valve Schedule

Associated MUA	Manufacturer Model No.	Flow Rate l/s
F600-MUA	Belimo G3 50 NVF120volt MFT US NO/FO V-10001	1.71
S750-MUA	Belimo G7 100 NVF120volt MFT US NO/FO P-10001	6.57
T600-MUA	Belimo G7 80 NVF120volt MFT US NO/FO V-P0001	3.65
T605-MUA	Belimo G3 50 NVF120volt MFT US NO/FO V-10001	2.37

Section 16114 - Cable Tray Schedule: CT008 – delete cables H005 and H006

Section 16122 – Power Cable List: S006 – edit destination from S230-FWP to VFD-S230-FWP

S006A – add 3/C #1 Plus 100% Ground,

– Routing: Existing Cable tray

– Origin: VFD-S230-FWP

– Destination: S230-FWP

– Description: Teck HL 90

H005 – Delete

H005A – Delete

H006 – Delete

H006A – Delete

Section 16820 – Motor Control Centre

Motor Schedule: Equipment Number S230-FWP: Change: MCC-2S to MCC-1S

Change: Size 4, FVNR starter to 200A-3P breaker

Add: VFD Supplied by Div. 11

Equipment Number F551-P: Delete

Equipment Number F552-P: Delete

Section 16471- Add Existing Panel PA Schedule

PANEL SCHEDULE											
PANEL PA											
DESCRIPTION	LOAD	BKR	CCT	A	B	C	CCT	BKR	LOAD	DESCRIPTION	
P210-SLP	0.3	15A	1	*			2	15A	1.2	Level Indicator Transmit. P322	
P220-SLP	0.3	15A	3		*		4	15A	1.2	Level Indicator Transmit. P312	
P230-SLP	0.3	15A	5			*	6	15A	1.2	Pump Pit Rec and Sump	
Spare in JB above P615 Control	0.8	15A	7	*			8	15A	0.4	Electrical Rm Rec.	
Standard Receptacles and Light	0.7	15A	9		*		10	15A	0.6	Exterior Rec.	
Standard Receptacles	0.4	15A	11			*	12	15A	0.4	Standard Receptacle(s)	
Receptacle		15A	13	*			14	15A	0.7	Standard Receptacle(s)	
Spare		15A	15		*		16	15A	0.5	Sampler S690-SAMP P930	
Spare		15A	17			*	18	15A		Spare	
Motorized Dampers Fermenter		15A	19	*			20	15A		Spare	
Motorized Dampers H642, H641		15A	21		*		22	-		Space	
Control Valve Fermenter Area		15A	23			*	24	-		Space	
Space		-	25	*			26	-		Space	
Space		-	27		*		28	-		Space	
Space		-	29			*	30	-		Space	
Space		-	31	*			32	-		Space	
Space		-	33		*		34	-		Space	
Space		-	35			*	36	-		Space	
Space		-	37	*			38	-		Space	
Space		-	39		*		40	-		Space	
Space		-	41			*	42	-		Space	
Voltage: 120/208V/3Ø/4W						Feeder: -					
Mains: 225A						Main Breaker: N/A					
Location: Headworks Control Room						Power Source: Panel HA					

DRAWINGS

- Replace: Drawing FE1-01-R0 with Drawing FE1-01-R1
- Drawing FE1-02-R0 with Drawing FE1-02-R1
- Drawing FM1-01-R0 with Drawing FM1-01-R1
- Drawing FM2-01-R0 with Drawing FM2-01-R1
- Drawing FM3-01-R0 with Drawing FM3-01-R1
- Drawing FM4-01-R0 with Drawing FM4-01-R1
- Drawing FP1-01-R0 with Drawing FP1-01-R1
- Drawing FP1-02-R0 with Drawing FP1-02-R1
- Drawing FP1-04-R0 with Drawing FP1-04-R1

Drawing FP1-05-R0 with Drawing FP1-05-R1
Drawing FP1-06-R0 with Drawing FP1-06-R1
Drawing FP1-07-R0 with Drawing FP1-07-R1
Drawing HE1-01-R1 with Drawing HE1-01-R2
Drawing HE2-01-R1 with Drawing HE2-01-R2
Drawing HM2-01-R1 with Drawing HM2-01-R2
Drawing HM2-02-R1 with Drawing HM2-02-R2
Drawing HM3-01-R1 with Drawing HM3-01-R2
Drawing LC1.01-R0 with Drawing LC1.01-R1
Drawing LC2.01-R0 with Drawing LC2.01-R1
Drawing LE1-01-R0 with Drawing LE1-01-R1
Drawing LI1-01-R0 with Drawing LI1-01-R1
Drawing LI2-01-R0 with Drawing LI2-01-R1
Drawing LI2-02-R0 with Drawing LI2-02-R1
Drawing LI2-03-R0 with Drawing LI2-03-R1
Drawing LI2-04-R0 with Drawing LI2-04-R1
Drawing LI2-06-R0 with Drawing LI2-06-R1
Drawing LI4-06-R0 with Drawing LI4-06-R1
Drawing LM2-02-R0 with Drawing LM2-02-R1
Drawing LM4-01-R0 with Drawing LM4-01-R1
Drawing LM4-02-R0 with Drawing LM4-02-R1
Drawing LM4-04-R0 with Drawing LM4-04-R1
Drawing LM4-05-R0 with Drawing LM4-05-R1
Drawing LM4-06-R0 with Drawing LM4-06-R1
Drawing LP2-04-R0 with Drawing LP2-04-R1
Drawing LP3-01-R0 with Drawing LP3-01-R1
Drawing LS1-01-R0 with Drawing LS1-01-R1
Drawing LS1-02-R0 with Drawing LS1-02-R1
Drawing LS1-03-R0 with Drawing LS1-03-R1
Drawing LS1-04-R0 with Drawing LS1-04-R1
Drawing LS1-05-R0 with Drawing LS1-05-R1
Drawing LS1-06-R0 with Drawing LS1-06-R1

Drawing PM1-01-R0 with Drawing PM1-01-R1
Drawing PM2-01-R0 with Drawing PM2-01-R1
Drawing PP0-01-R0 with Drawing PP0-01-R1
Drawing PP1-01-R0 with Drawing PP1-01-R1
Drawing PP1-02-R0 with Drawing PP1-02-R1
Drawing SA6-01R0 with Drawing SA6-01R1
Drawing SA8-01R0 with Drawing SA8-01R1
Drawing SA9-01R0 with Drawing SA9-01R1
Drawing SE1-01-R0 with Drawing SE1-01-R1
Drawing SE2-02-R0 with Drawing SE2-02-R1
Drawing SE2-03-R0 with Drawing SE2-03-R1
Drawing SE3-02-R0 with Drawing SE3-02-R1
Drawing SE3-03-R0 with Drawing SE3-03-R1
Drawing SE4-01-R0 with Drawing SE4-01-R1
Drawing SM1-01-R0 with Drawing SM1-01-R1
Drawing SM1-02-R0 with Drawing SM1-02-R1
Drawing SM2-01-R0 with Drawing SM2-01-R1
Drawing SM3-02-R0 with Drawing SM3-02-R1
Drawing SM5-02-R0 with Drawing SM5-02-R1
Drawing SP1-01-R0 with Drawing SP1-01-R1
Drawing SP1-02-R0 with Drawing SP1-02-R1
Drawing SP1-03-R0 with Drawing SP1-03-R1
Drawing SP1-04-R0 with Drawing SP1-04-R1
Drawing SP1-06-R0 with Drawing SP1-06-R1
Drawing SP1-07-R0 with Drawing SP1-07-R1
Drawing SP2-03-R0 with Drawing SP2-03-R1
Drawing SP2-07-R0 with Drawing SP2-07-R1
Drawing SS2-01R0 with Drawing SS2-01R1
Drawing SS2-02R0 with Drawing SS2-02R1
Drawing SS2-03-R0 with Drawing SS2-03-R1
Drawing SS2-04-R0 with Drawing SS2-04-R1
Drawing SS3-01-R0 with Drawing SS3-01-R1

Drawing SS3-02-R0 with Drawing SS3-02-R1
Drawing SS3-03-R0 with Drawing SS3-03-R1
Drawing SS3-04-R0 with Drawing SS3-04-R1
Drawing SS3-05-R0 with Drawing SS3-05-R1
Drawing SS3-06-R0 with Drawing SS3-06-R1
Drawing SS4-01-R0 with Drawing SS4-01-R1
Drawing SS4-02-R0 with Drawing SS4-02-R1
Drawing SS6-01-R0 with Drawing SS6-01-R1
Drawing SS6-02-R0 with Drawing SS6-02-R1
Drawing SS10-02-R0 with Drawing SS10-02-R1
Drawing TA1-01-R0 with Drawing TA1-01-R1
Drawing TA1-02-R0 with Drawing TA1-02-R1
Drawing TA3-01-R0 with Drawing TA3-01-R1
Drawing TE1-02-R0 with Drawing TE1-02-R1
Drawing TE1-03-R0 with Drawing TE1-03-R1
Drawing TE2-01-R0 with Drawing TE2-01-R1
Drawing TM1-02-R0 with Drawing TM1-02-R1
Drawing TM2-02-R0 with Drawing TM2-02-R1
Drawing TM4-01-R0 with Drawing TM4-01-R1
Drawing TM4-02-R0 with Drawing TM4-02-R1
Drawing TM4-04-R0 with Drawing TM4-04-R1
Drawing TP1-01-R0 with Drawing TP1-01-R1
Drawing TP1-05-R0 with Drawing TP1-05-R1
Drawing TS2-01-R0 with Drawing TS2-01-R1
Drawing TS2-02-R0 with Drawing TS2-02-R1
Drawing TS2-03-R0 with Drawing TS2-03-R1
Drawing TS2-04-R0 with Drawing TS2-04-R1
Drawing TS2-05-R0 with Drawing TS2-05-R1
Drawing TS3-01-R0 with Drawing TS3-01-R1
Drawing TS4-01-R0 with Drawing TS4-01-R1
Drawing TS5-01-R0 with Drawing TS5-01-R1
Drawing TS5-02-R0 with Drawing TS5-02-R1

Drawing TS5-03-R0 with Drawing TS5-03-R1

Drawing TS5-04-R0 with Drawing TS5-04-R1

Drawing TS5-05-R0 with Drawing TS5-05-R1

Drawing TS5-06-R0 with Drawing TS5-06-R1

Drawing TS6-01-R0 with Drawing TS6-01-R1

Drawing TS6-02-R0 with Drawing TS6-02-R1

Drawing TS6-03-R0 with Drawing TS6-03-R1

Add: Drawing SA5-03-R0

Drawing SA5-04-R0