



ADDENDUM 4 BID OPPORTUNITY NO. 154-2005

WINNIPEG WATER TREATMENT PROGRAM – SUPPLY OF DISSOLVED AIR FLOTATION AND FLOCCULATION EQUIPMENT

URGENT

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

ISSUED: June 17, 2005
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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 11 of Form A: Bid may render your Bid non-responsive.

PART A – BID SUBMISSION

Replace: Part A – Bid Submission with 154-2005_Addendum_4-Bid_Submission
(Form G2(R1) has been replaced by Form G2(R2))

PART B – BIDDING PROCEDURES

B9. SALIENT FEATURES

Revise: B9.1.1(c) to read: In order to determine recycle pump energy usage for Operating Conditions No.1, No. 2 and No. 3 in Form N: Salient Features, the Bidder shall use the following calculation (Note: Allowance for one of the DAF recycle headers to be closed at these operating points is considered acceptable for the purposes of making this calculation, as long as the air loading requirements are met at that condition):

$$\text{Air Loading} = \frac{Q_r \times (C_{sat} - C_{atm})}{(1000 * Q_{basin})} \dots\dots\dots \text{Equation (1)}$$

$$C_{sat} = \left(\frac{P_{sat}}{2.955} \right) \times 0.97^{T^{0.845}} \times 0.95 \times \frac{\eta_{sat}}{100} \dots\dots\dots \text{Equation (2)}$$

$$C_{atm} = \left(\frac{101.325}{2.955} \right) \times 0.97^{T^{0.845}} \dots\dots\dots \text{Equation (3)}$$

Where;

Q_r	= Recycle flow, in Litres/second
Q_{basin}	= Flow through the DAF basin, not including the recycle flow, m ³ /second
C_{sat}	= Concentration of dissolved air in recycle stream, mg air/L
C_{atm}	= Concentration of dissolved air in saturated water at atmospheric pressure, mg air/L
P_{sat}	= Saturator Pressure, kPa(absolute)
T	= Water Temperature, Celcius
η_{sat}	= Saturator Efficiency (in percent) For packed bed saturators, an efficiency of 95% shall be assumed For unpacked saturators, an efficiency of 65% shall be assumed, unless independently verified evidence is furnished in accordance with B5 to demonstrate that a higher efficiency is consistently achieved

PART E – SPECIFICATIONS

Section 16815

- Revise: 2.1.1.1 to read: ABB ACS 550 Series for motors less than 7.4kW, ABB ACS 800 Series for motors 7.4kW or larger.
- Revise: 2.1.10.14 to read: Regenerative braking for all motors 7.4kW or larger.
- Clarification: 2.1.8.1 NEMA 12 with filters is an acceptable enclosure, provided the VFD is installed in a dry non-corrosive environment.