Corporate Finance Department
Materials Management Branch

ADDENDUM 4
BID OPPORTUNITY NO. 74-2005

NEWPCC SECONDARY EFFLUENT UV DISINFECTION FACILITY

ISSUED: March 29, 2005
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URGENT

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

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

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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 9 of Form A: Bid may render your Bid non-responsive.

PART E – SPECIFICATIONS

E1.2 The following Drawings are affected by this Addendum. Detailed descriptions of the changes are included subsequently in this document under the heading "DRAWINGS"

Drawing No.	Drawing	Description of Change
66303D-CS2.03	Structural - Plan Above Elevation 231.620	Existing drawing revised by comment
66303D-CS2.04	Structural - Plan Above Elevation 233.520	Clarification
66303D-CS3.01	Structural - Building Sections	Existing drawing revised by comment
66303D-CS4.05	Structural - Sections and Details Sheet 2 of 4	Existing drawing revised by comment
66303D-CP1.04	Process - UV Pump Influent Wetwell/Channel	Existing Drawing revised by comment
66303D-CP1.05	Process - Axial Flow Pump Outline General Arrangement and Details	Existing drawing revised by comment
66303D-CP2.02	Process - Pump Station and UV Plan	Clarification
66303D-CP2.03	Process - Influent Pump Inlet Sections and Details	Existing drawing revised by comment
66303D-CM2.01	Mechanical - Main Floor Plumbing Plan Mechanical Mezzanine Plumbing Plan	Existing drawing revised by comment
66303D-CM4.01	Mechanical - Main Floor Ventilation Plan	Clarification
66303D-CM6.01	Mechanical - Sections	Existing drawing revised by comment
66303D-CM7.02	Mechanical - Plumbing Details and Schematics Sheet 2 of 2	Clarification

Section 01060 Clause 1.3 Clarification:

The Building Code Information with respect to the Building Permit requirements are:
Footprint: 536.7 square metres
Occupancy Classification: Group F, Division 2

Section 01210 Clause 1.2 Revise to Read:

.2 The equipment supplied under both of these Bid Opportunities will be delivered to, off-loaded and stored at the City's North End Water Pollution Control Centre (NEWPCC). The supply contractor is responsible for delivery and offloading the equipment, and placing the equipment in the City's storage area. The Contractor is responsible for witnessing the delivery, and removing the equipment from the City's storage area for installation.

Section 03250 Clause 2.1.3 Revise to Read:

Expansion Joint Filler: closed cell vinyl foam, sizes indicated on Drawings, 90%+ recovery after 50% compression, 380 kPa pressure for 50% compression, CPD Closed Cell Foam Joint Filler or accepted alternate.

Clarification: Expansion Joint Filler is intended to be used for structural concrete expansion joints. The Pre-moulded Expansion Joint Filler (see Clause 2.1.12) is intended for joints associated with slabs on grade such as for the Effluent Sampling Building.

Section 03250 Clause 2.1 Add Clause 2.1.16 as follows:

Backer Rod: Closed cell vinyl foam, 6 mm minimum thick wall, outsized 30 – 50%.

Section 03300 Table A.

Add the following to Mix Type 1, Portion of Structure: "UV equipment installation"

Clarification: This material (Concrete, Mix Type 1) to fill the voids around the UV reactor chambers after placement in channels. Trojan Technologies Inc estimates approximately 7 cubic metres per reactor is required.

Section 07720

Add this new section 07720 Type S Roof Scuttle Specification

Section 11035

Rename this Section "Process and Related Systems Equipment Commissioning"

Delete Clause 2.1

Delete Clause 2.2

Delete Clause 2.3

Clause 2.4.1 Add the following New Clause 2.4.1.8

.8 All related systems in other Divisions (Division 15, 16, and 17) are installed and fully operational

Delete Clause 2.4.3.4

Section 11055: Replace this section with the revised Section 11055 rev 1

Section 15010 Clause 1.29.3 Revise to Read:

Exposed piping shall be painted in accordance with the requirements of 15010.1.23. Insulated piping shall be identified in accordance with the requirements of 15010.1.22.3, 15010.1.22.4, and 15010.1.22.5

Section 15116 Clause 2.6.1 Clarification:

The relief valves for the chilled glycol, heating glycol and condenser glycol piping systems shall each have a 20 mm pressure relief valve set at 689 kPa

Section 15310 Clause 2.1.1 Revise to Read:

.1 Single stage air-cooled reciprocating vertical tank mounted V-belt drive with aftercooler (maximum discharge air temperature 49 degrees C)

Section 15310 Clause 2.1.1 Revise to Read:

.1 Single stage air-cooled reciprocating vertical tank mounted V-belt drive with aftercooler (maximum discharge air temperature 49 degrees C)

Section 15310 Clause 2.1.2.2 Revise as follows

Change "Pressure lubricated" to read "Splash lubricated"

Section 15310 Clause 2.1.3 Add New Clause

2.1.3 Compressors shall have a two-year warranty

Section 15310 Clause 2.2.4 Revise to Read

Refrigeration unit shall be hermetically sealed type, to operate intermittently (cycling) to maintain specified 2.7 degree C dewpoint. House unit in steel cabinet provided with access door and panel for maintenance.

Section 15310 Clause 3.2.2 Delete this Clause

Section 15650 Clause 2.5.1 Revise to Read

2.9.1 Filters shall be FARR 25 mm 30/30 pleated filters.

Section 15800 Clause 2.9.1 Revise to Read

2.9.1 Filters shall be FARR 50 mm 30/30 pleated filters.

Section 15805 Clause 2.9.1 Revise to Read

2.9.1 Filters shall be FARR 50 mm 30/30 pleated filters.

Section 15999 Replace 1.8 Air Compressor Schedule with the following revised Air Compressor Schedule

1.8 Air Compressor Schedule (Revised)

Tag No.	U-455-AC-1	U-455-AC-2
Location	Mechanical Mezz.	Mechanical Mezz.
Area Served	UV Disinfection Area	UV Disinfection Area
Type	Reciprocating, Single stage, packaged	Reciprocating, Single stage, packaged
Manufacturer	Quincy	Quincy
Model	QTV-3-60	QTV-5-60
Compressor		
Bore, mm	70	70
Stroke, mm	50	50
Number of Cylinders	2	2
Speed, RPM	665	990
Piston Displacement, L/s	4.3	6.4
Displacement @ 100 psi, L/s	5.2	8.5
Motor		
Type	Electric	Electric
Power kW (hp)	2.25 (3)	3.75 (5)
Voltage/Ph/Hz	600/3/60	600/3/60
Air Receiver	Vertical	Vertical
Size, diameter – mm	475	475
Volume – L	114	114
Discharge Connection – NPT	1/2 inch	1/2 inch
Physical Data		
Overall Length, mm	675	675
Overall Height, mm	1075	1075
Overall Weight, kg	77	77
Acceptable Manufacturers	Ingersoll-Rand	Ingersoll-Rand
	Gardner Denver	Gardner Denver
	Champion	Champion
Accessories :		
Beltguard Mounted Aftercooler (Maximum Leaving Air Temperature 49 degrees C (120 degrees F) / Normal Leaving temperature 38 degrees C (100 degrees F))	Yes	Yes
Simplex Control Panel with Low Oil Level Shutdown Switch	Yes	Yes

Section 15999 Replace 1.9 Air Dryer Schedule with the following revised Air Dryer Schedule

1.9 Air Dryer Schedule (Revised)

Tag No.	U-455-AD-1	U-455-AD-2
Location	Mechanical Mezz.	Mechanical Mezz.
Area Served	UV Disinfection Area	UV Disinfection Area
Type	Refrigerated Air Dryer	Refrigerated Air Dryer
Manufacturer	ZEKS	ZEKS
Model	18HSE	18HSE
Capacity Sm^3/min (SCFM)	0.51 (18)	0.51 (18)
Inlet Temperature, deg C (deg F)	38 (100)	38 (100)
Dewpoint Temperature, deg C (deg F)	3 (37)	3 (37)
Maximum Pressure drop, kPa (psi)	35 (5)	35 (5)
Length, mm (in)	360 (14)	360 (14)
Depth, mm (in)	360 (14)	360 (14)
Height, mm (in)	450 (18)	450 (18)
Shipping Weight, kg (lbs)	46 (101)	46 (101)
Air connection In & Out	1 / 2 in FPT	1 / 2 in FPT
Drain	1 / 8 in NPT	1 / 8 in NPT
Motor		
Type	Electric	Electric
Power, kW (hp)	0.15 (0.20)	0.15 (0.20)
Voltage/Ph/Hz	115/1/60	115/1/60
Operating kW	0.51	0.51
Max Working Pressure kPag (psig)	1724 (250)	1724 (250)
Refrigerant	R-22	R-22
Operation	Cycling	Cycling
Accessories		
Analog gauge package	Yes	Yes
Electronic timer condensate drain	Yes	Yes

Division 16

Delete the following from the Contract:
Supply and installation of 5MVA 66kV/4160V transformer PDT-1
Supply and install of 66 kV overhead line from the property line and associated hardware and equipment
Supply and install of 66 kV underground cable
Excavation and backfill associated with the above items

Section 16115 Clause 2.1.2 Revise to Read:

100 % (5000 A) neutral for Ultraviolet (UV) Disinfection bus

Section 16122 Power Cable List

Delete "200 % Neutral" for Items P008 and P009. Cable shall be complete with fully rated 100 % neutral

Delete "200 % Neutral" for Items P012, P013, P014, P015, P016, and P017. Cable shall be complete with fully rated 100 % neutral

Section 16426 Clause 2.5.1 Revise to Read:

.1 UV Distribution: Three phase, 100 % (5000 A) capacity neutral bare busbar, continuous current rating 5000 A self-cooling, extending the full width of cubicle, suitably supported on insulators

Section 17600 Distribution Control System Input/Output List

Line Item 236: Rename "U460-PDSH-1" to "U460-**PDIT**-1" and change Revision Number to "2"
Line Item 237: Rename "U480-PDSH-1" to "U480-**PDIT**-1" and change Revision Number to "2"
Line Item 239: Rename "U460-PBV-1" to "U**480**-PBV-1" and change Revision Number to "2"

Section 17700 Secondary Effluent Disinfection Facility Instrument Index

Line Item 173: Rename "U460-DPT-1" to "U460-**PDIT**-1" and change Revision Number to "2"
Line Item 174: Rename "U480-DPT-1" to "U480-**PDIT**-1" and change Revision Number to "2"

Section 17701-A

Page 11 Instrument Specification Number I-111, Water Temperature Transmitter: Add two devices, U480-TT-1 and U480-TT-2 to this sheet.

Add the following New Specification Sheet for Instrument I-113, Differential Pressure Transmitter.

INSTRUMENT SPECIFICATION NUMBER:	I113
DEVICE:	Differential Pressure Transmitter
TAG:	U460-PDIT-1 U480-PDIT-1
SERVICE:	Differential pressure across Glycol Loop Pressure Sustaining Valves
RANGE:	60-180 KPa
INACCURACY:	±0.5% of span or better
OUTPUT:	4 to 20 mA DC into 500 OHM load
POWER SUPPLY:	Loop Powered
DISPLAY	Three digit LED display with one decimal point.
ENCLOSURE:	NEMA 4, 4x.
MOUNTING: (TRANSMITTER)	Wall Mount with integral 3 port manifold 1/2 inch NPT Process connections
ACCESSORIES:	Process impulse lines
MANUFACTURER AND MODEL:	Rosemount or Approved equal

DRAWINGS

Drawing 66303D-CS2.03 Rev 1 Revise as Follows

Relocate the expansion joint shown 5664 mm east of Grid Line 1 to 1000 mm west of Grid Line 1.

Drawing 66303D-CS2.04 Rev 1 Clarification

Clarification: The lean mix concrete fill is intended to backfill around the Outfall Chamber base slab to ensure continuous bearing of the outfall pipe. The limestone base course shall be continuous from Effluent Channel to Outfall Chamber. Compaction of the base course will be as far as physically possible from each side of the outfall pipe.

Drawing 66303D-CS3.01 Rev 1 Revise as Follows

Relocate the expansion joint shown 5664 mm east of Grid Line 1 to 1000 mm west of Grid Line 1.

Drawing 66303D-CS4.05 Rev 1 Revise as Follows

Detail S-S3.02: Delete the Note "Guiding Plate Refer to Process Drawings"

Add Note: Backfill around pump cans and draft tubes to be Type 2, compacted to a density of at least 95 % Standard Proctor, a minimum of 1000 mm around each pump can and draft tube.

Drawing 66303D-CP1.04 Rev 0 Revise as Follows

Note 4: Existing Gate YG-12B is Cast Iron Sluice Gate, 1219 mm wide by 2134 mm high. Shaft is approximately 5570 mm (18 ft long), 416 stainless steel, 64 mm (2.5 inch) diameter, four (4) threads per inch, Acme thread

Drawing 66303D-CP1.05 Rev 0 Revise as Follows

Detail 1-P1.02 Delete "SD-001 Pipe Bedding" Add "Class B Pipe Bedding –Type 2 Granular material as per SD-001 and CW2030"

Drawing 66303D-CP2.03 Rev 0 Revise as Follows

Detail B-P2.03 Revise Note to read: "Vortex Breaker Bar, 200 HSS, Carbon Steel, Minimum 10 mm thick, Coated to Spec 11900"

Drawing 66303D-CP2.02 Rev 0 Clarification

Note 3: Refer to Section 11055 for Pipe Spool Specification

Drawing 66303D-CM2.01 Rev 0 Revise as follows

Delete the DCW branch shown between the HWT and the WC

Drawing 66303D-CM7.02 Rev 0 Clarification

No triple duty valves to be used on pump elbow