THE REGIONAL MUNICIPALITY OF DURHAM
AND
THE REGIONAL MINICIPALITY OF YORK

REQUEST FOR PROPOSALS RFP-604-2008

TO DESIGN, BUILD, OPERATE AND MAINTAIN AN ENERGY FROM WASTE FACILITY

ADDENDUM #8 – OCTOBER 29, 2008

This addendum will form a part of the Proposal Documents for the above-noted proposal and shall be read in conjunction therewith. This addendum will take precedence over all requirements of the original Proposal Documents and any addenda issued previously. Bidders shall acknowledge receipt of this addendum by signing and returning it with the completed Proposal submitted. If, in the opinion of the Regions, the addendum issued affects the price of the proposal and the addendum is not returned or acknowledged, then the proposal submitted will be deemed non-compliant and rejected. If, in the opinion of the Regions, the addendum does not affect the proposal price and it is not submitted with the proposal or acknowledged, the bidder will be allowed two working days to submit the missing signed addendum to the Region of Durham Purchasing Section.

Please note the following changes/clarifications:

The purpose of this addendum is to provide additional clarification and specific revisions regarding heating values for municipal solid waste as the basis for design and guarantee requirements for throughput capacity for the energy from waste Facility.

<u>Addendum #8, Revision 1</u>

Remove: Appendix '1' to Project Agreement – Technical Requirements, Section 2, Page 2, Paragraph 3

Delete the following:

"The guaranteed initial processing rate of 426 tonnes per day will be required when firing municipal solid waste within the higher heating value (HHV) range of 11 – 15 MJ/kg and all processing systems designed accordingly. Economic evaluation of proposals and electrical power production will be based upon a HHV of 12.8 MJ/kg. Technical evaluation will include confirmation that equipment and systems have been designed for the HHV range. Besides providing a safe and environmentally acceptable method of waste disposal, this Facility is to efficiently generate electrical power as well as have the capability to provide hot water for a district energy system. These technical requirements discuss the minimum technical requirements and provide background information to be used as the basis for the design of the proposed Facility."

Replace With:

"The Facility must be capable of processing municipal solid waste with HHV in the range of 11 MJ/kg to 15 MJ/kg. DBO Contractor shall size the Facility to operate continuously at a minimum processing rate of 426 tonnes per day of municipal solid waste based on an average waste HHV of 13.0 MJ/kg, which shall be the basis for economic evaluation of proposals, electrical power production and will be the DBO Contractor's guaranteed initial phase processing rate. Technical evaluation will include confirmation that equipment and systems have been designed for the HHV range. Besides providing a safe and environmentally acceptable method of waste disposal, this Facility is to efficiently generate electrical power as well as have the capability to provide hot water for a district energy system. These technical requirements discuss the minimum technical requirements and provide background information to be used as the basis for the design of the proposed Facility."

Addendum #8, Revision 2

Remove: Appendix '1' To Project Agreement – Technical Requirements, Section 2, Page 5, Paragraphs 2 and 3

Delete the following:

"During any consecutive 12 month period, the DBO Contractor will attain a minimum annual Facility processing throughput of 140,000 Tonnes per Year (155,555 x 90%) based on a higher heating value of 12.8 MJ/kg.

The DBO Contractor will guarantee throughput capacity based on a range of higher heating values (11 to 15 MJ/kg)."

Replace With:

"During any consecutive 12 month period, the DBO Contractor will guarantee a minimum annual Facility processing capacity of 140,000 tonnes of municipal solid waste per year based on an average higher heating value of 13.0 MJ/kg. The Facility shall be capable of processing input waste having higher heating values within the range of 11 to 15 MJ/kg."

Addendum #8, Revision 3

Remove: Appendix '1' To Project Agreement – Technical Requirements, Section 4.1, Page 10, Paragraph 1

Delete the following:

"The Facility will be designed such that, aside from periods of scheduled and forced outages including shutdown and start-up and provided the availability of sufficient quantities of processible Waste, the Facility will operate continuously at a Guaranteed Processing Rate equal or exceeding 426 tonnes per day (140,000 tonnes per year/(365*0.90) across the HHV range of 11-15 MJ/kg."

Replace With:

"The Facility will be designed such that, aside from periods of scheduled and forced outages including shutdown and start-up and provided the availability of sufficient quantities of processible Waste, the Facility will operate continuously at a Guaranteed Processing Rate equal to or exceeding 426 tonnes per day (140,000 tonnes per year/(365*0.90)) based on an average HHV of MSW of 13.0 MJ/kg.. The Facility shall be capable of processing waste having heating values within the range of 11-15 MJ/kg."

Addendum #8, Revision 4

Remove: Appendix '1' To Project Agreement – Technical Requirements, Section 4.3, Page 11, Paragraph 1

Delete the following:

"The HHV value 12.8 MJ/kg will be used as the design value for the MCR capacity of the Facility and its individual furnace/ boiler processing lines. The steam generating units must be sized to process the design throughput at 15 MJ/kg and other systems and accessories must be sized to accommodate the air, flue gas and steam flows associated with that throughput. However, it must be understood that actual HHV values may fluctuate and throughput is to be guaranteed across the range of 11 – 15 MJ/kg. Economic evaluations will be made based on an HHV of 12.8 MJ/Kg."

Replace With:

"The HHV value 13.0 MJ/kg will be used as the design value for the MCR capacity of the Facility and its individual furnace/ boiler processing lines (i.e. "design HHV"). The steam generating units must be sized to process the design throughput at 13 MJ/kg. and other systems and accessories must be sized to accommodate the air, flue gas and steam flows associated with that throughput. However, it must be understood that actual HHV values may fluctuate and throughput is to be guaranteed at an average MSW HHV of 13.0 MJ/kg. The Facility shall be capable of processing waste having heating values within the range of 11 – 15 MJ/kg. Economic evaluations will be made based on an HHV of 13.0 MJ/Kg."

Addendum #8, Revision 5

Remove: Appendix '1' to Project Agreement – Technical Requirements, Section 4.4.4, Page 12, Paragraph 1

Delete the following:

"The electrical generating capacity will be configured for a single turbine-generator which will be able to handle the steam equivalent of at least the full throughput capacity of processible waste (HHV of 12.8 MJ/kg), equivalent to two units online at 100% MCR (426 tonnes per day). The steam turbine room shall be sized to accommodate the additional turbine generator for the 110,000 tonne/year future expansion size (335 tpd). The transmission capacity for the EFW Facility will be designed for the ultimate processing capacity of 400,000 tonnes per year (1,218 tpd)."

Replace With:

"The electrical generating capacity will be configured for a single turbine-generator which will be able to handle the steam equivalent of at least the full throughput capacity of processible waste equivalent to one or two units online at 100% MCR (426 tonnes per day at an HHV of 13.0 MJ/kg.), The DBO Contractor shall incorporate sufficient margin into the design of the turbine (minimum 5% margin) to accommodate normal fluctuations and overfiring of the boilers. The steam turbine room shall be sized to accommodate the additional turbine generator for the minimum 110,000 tonne/year future expansion size (335 tpd). The transmission capacity for the EFW Facility will be designed for the ultimate processing capacity of 400,000 tonnes per year (1,218 tpd)."

Addendum #8, Revision 6

Remove: Appendix '1' to Project Agreement – Technical Requirements, Section 8.2.2.2, Page 49, Paragraphs 1 to 4

Delete the following:

"The gross heat release per plan area of grate: will not exceed 4,500,000 KJ/sq.m/hr.

The gross heat release of each furnace shall not exceed 470,000 KJ/hr-m3.

Maximum gross heat release equals the maximum higher heating value of the Processible Waste 12.8 MJ/kg times Facility capacity of 426 tonnes per day divided by 24, plus the heat added by preheated combustion air.

Maximum gross furnace heat liberation rate and volume basis equals the gross heat release divided by the furnace volume as defined below."

Replace With:

"The gross heat release per plan area of grate: will not exceed 4,500,000 KJ/sq.m/hr.

The gross heat release of each furnace shall not exceed 470,000 KJ/hr-m3.

Maximum gross heat release equals the maximum higher heating value of the Processible Waste 13.0 MJ/kg times Facility capacity of 426 tonnes per day divided by 24, plus the heat added by preheated combustion air.

Maximum gross furnace heat liberation rate and volume basis equals the gross heat release divided by the furnace volume as defined below."

Addendum #8, Revision 7

Remove: Appendix 'A' To Project Agreement – Appendix 10, "Pre-Acceptance Testing Requirements and Acceptance Test Procedures" Section 1.3, Page 133, Paragraph 2

Delete the following:

"Throughput capacity will not be adjusted for any reason other than crane scale related adjustments, unless it is demonstrated that the HHV of the waste fired is outside acceptable range, whereas 10,500 to 15,000 kJ/kg shall constitute the acceptable range for the HHV and the Reference Waste HHV shall equal 12,600 kJ/kg."

Replace With:

"Throughput capacity will not be adjusted for any reason other than crane scale related adjustments, unless it is demonstrated that the HHV of the waste fired is outside the acceptable range, whereas 11,000 to 15,000 kJ/kg shall constitute the acceptable range for the HHV and the Reference Waste HHV shall equal 13,000 kJ/kg."

Addendum #8, Revision 8

Remove: Appendix 'A' To Project Agreement – Appendix 10, "Pre-Acceptance Testing Requirements and Acceptance Test Procedures" Section 1.14, Page 141, Paragraph 3

Delete the following:

"The Throughput Capacity Guarantee is demonstrated if the actual amount of waste (in tonne) processed during the 5-day test is 1,918 tonnes (or 959 tonnes per unit if DBO Contractor utilizes two units) of Reference Waste HHV of 12.6 MJ/kg."

Replace With:

"The Throughput Capacity Guarantee is demonstrated if the actual amount of waste (in tonne) processed during the 5-day test is 2,130 tonnes (or 1,065 tonnes per unit if DBO Contractor utilizes two units) of Reference Waste with average HHV of no less than 13.0 MJ/kg."

Addendum #8, Revision 9

Remove: RFP-604-2008, Appendices, Forms and Schedules, Form 5 Detailed Facility and Equipment Data, Paragraph 2

Delete the following:

"Unless otherwise specified in this Proposal form, variable quantities (i.e. temperature, pressures, mass and volumetric flows, gas and liquid velocities, heat duties, powers and efficiencies) are to be given for operating conditions which correspond with the Maximum Continuous Rating (MCR) operation of the unit of equipment assuming fuel HHV – 12.8 MJ/kg. The terms "design," and "maximum continuous rating (MCR)," are synonymous. Unless otherwise indicated, "percent" and "%" mean weight percent."

Replace With:

"Unless otherwise specified in this Proposal form, variable quantities (i.e. temperature, pressures, mass and volumetric flows, gas and liquid velocities, heat duties, powers and efficiencies) are to be given for operating conditions which correspond with the Maximum

Continuous Rating (MCR) operation of the unit of equipment assuming fuel HHV – 13.0 MJ/kg. The terms "design," and "maximum continuous rating (MCR)," are synonymous. Unless otherwise indicated, "percent" and "%" mean weight percent."

Addendum 8, Revision 10

Remove: RFP-604-2008, Appendices, Forms and Schedules, Form 5 Detailed Facility and Equipment Data, Part A, Item 4

Delete the following:

”4. Process Energy Balances:

Complete the following table for each column, corresponding to varying fuel HHV.

CASE A			
HHV, Processible Waste MJ/kg	11.2 **Low**	12.8 **MCR**	15.1 **High**
Furnace/Boiler Unit Feed Rate			
Excess air, %			
Furnace/boiler Losses per Unit (MJ/kg):			
Dry gas			
Sensible heat in dry gas			
H_2 and H_2O in fuel			
H_2O in combustion air			
H_2O from Residue pit & quench			
Unburned combustibles			
Radiation and convection			
Unaccounted (mfr.’s margin, max. 1.5%)			
Subtotal furnace/boiler losses			
(MJ/hr), per unit			
Total steam output:			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr (sum all units)			
Net efficiency of steam generating units, %			
Main Steam for each unit:			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Process Flow:			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Extractions:			
Feedwater Heater			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Dearator			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Plant Heat Rate			

Gross, HHV based			
Net, HHV based			
Turbine Heat Rate (average each unit)			
Energy Summary:			
Gross TG power output, MW, total			
In-plant electric consumption, MW			
Net Facility power output, MW			
Corresponding diagrams as described in Section 4.5.1 of the RFP Drawing Nos.:			
Furnace/Boiler MCR (each unit) in Tonne per hour of Processible Waste			

“

Replace with:

”4. Process Energy Balances:

Complete the following table for each column, corresponding to varying fuel HHV.

CASE A			
HHV, Processible Waste MJ/kg	11.0 **Low**	13.0 **MCR**	15.0 **High**
Furnace/Boiler Unit Feed Rate			
Excess air, %			
Furnace/boiler Losses per Unit (MJ/kg):			
Dry gas			
Sensible heat in dry gas			
H_2 and H_2O in fuel			
H_2O in combustion air			
H_2O from Residue pit & quench			
Unburned combustibles			
Radiation and convection			
Unaccounted (mfr.’s margin, max. 1.5%)			
Subtotal furnace/boiler losses			
(MJ/hr), per unit			
Total steam output:			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr (sum all units)			
Net efficiency of steam generating units, %			
Main Steam for each unit:			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Process Flow:			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			

Extractions:			
Feedwater Heater			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Dearator			
Pressure, bars			
Temperature, ^{O}C			
Mass flow, kg/hr			
Plant Heat Rate			
Gross, HHV based			
Net, HHV based			
Turbine Heat Rate (average each unit)			
Energy Summary:			
Gross TG power output, MW, total			
In-plant electric consumption, MW			
Net Facility power output, MW			
Corresponding diagrams as described in Section 4.5.1 of the RFP Drawing Nos.:			
Furnace/Boiler MCR (each unit) in Tonne per hour of Processible Waste			

"

Addendum #8, Revision 11

Remove: RFP-604-2008, Appendices, Forms and Schedules, Form 5 Detailed Facility and Equipment Data, Part A, Item 5

Delete the following:

"5. Facility Water Mass Balance Diagrams for: (a) average day and (b) peak day Facility Water Consumption conditions.

a. 426 tonne/day Facility Throughput, average day of year with respect to Facility water consumption. See attached Drawing No. _____.

b. 426 tonne/day Facility Throughput, peak summertime daily Facility Water Consumption for average climatological year. See Drawing No. _____.

Basis for both a) and b) above is HHV = 12.8 MJ/kg and 426 tonne/day Throughput."

Replace With:

"5. Facility Water Mass Balance Diagrams for: (a) average day and (b) peak day Facility Water Consumption Conditions.

a. 426 tonne/day Facility Throughput, average day of year with respect to Facility water consumption. See attached Drawing No. ___.

b. 426 tonne/day Facility Throughput, peak summertime daily Facility Water Consumption for average climatological year. See Drawing No.__.

Basis for both a) and b) above is HHV = 13.0 MJ/kg and 426 tonne/day Throughput."

The information contained in this addendum is explicitly applicable to all articles and clauses noted in this addendum. In addition, this addendum is applicable to other related articles and clauses of the Request for Proposals not specifically noted herein, as may be required in order to interpret the Request for Proposals in a fashion which is internally consistent with all addenda issued in relation thereto.

I/we hereby acknowledge receipt of this addendum.

_____
Signed (Must be Signing Officer of Firm)

_____
Position

_____
Name of Firm