

## Response to Further Requests for Information from the Environment Strategic Policy Committee of DCC

I refer to our document from March 31<sup>st</sup> submitted to Dublin City Council's Environmental Strategic Policy Committee and to the subsequent written comments from the Committee member, Mr McCarthy dated April 5<sup>th</sup>.

### Testing Laboratory Protocol

Please now find attached the following documents:

Exova Catalyst General Method Statement



Site Specific Protocol for DWtE



Paper on Sampling in Square & Circular Ducts



### Management of Activated Carbon

I refer the Committee to the document prepared and submitted by the DWtE Operations Team at the end of March, and also to the Report on the Flue Gas Treatment System prepared by CDM Smith at that time.

Numerous questions are asked about the quantity of carbon to be used and why there is a difference about the amount we will use – yet no one has said exactly what quantity we will use. The reason being is there is no definitive answer to the quantity that will be used as each boiler line is different at each plant and even more so, the waste feedstock is not homogenous – and the nature of the waste being converted is fundamental.

At all times – during commissioning or during normal operation – the additives required will be quantified by the process requirements to meet the emission standards dictated by the EU standards and set down in the facility EPA Licence. We will use whatever quantities of carbon and lime additives are required to meet these emission standards and the adherence of the facility to the standards will indicate clearly if sufficient additives are being utilized.

In our facility the SemiDry system technology employs the principle of the circulating fluidized bed, which has been used with success for many years in flue gas purification. The process has demonstrated its simplicity and efficiency in a multitude of energy-from-waste plants.

Briefly, the SemiDry system works as follows: Downstream of the combustion section and steam generator, flue gasses are channeled directly in to the SemiDry reactor without pretreatment. Reagents for separation – hydrated lime or calcined lime and activated carbon – are metered into the stream here and water is injected at the same time.

The temperature drops below 160°C as a result, improving separation while activating the lime. Pollutants react with the additives in the SemiDry reactor, forming products that can be trapped by the downstream fabric filter. The residue collected on the fabric filter is recycled to the SemiDry reactor in order to boost separation efficiency and hold emissions low even when feed gas is variable.

Virtually all modern plants utilize a system where the FGT residues are recycled – this is normal best practice. It should be noted that it is also covered at Section 4.3.3.7 of the Reference Document on the Best Available Techniques for Waste Incineration. For your information please find attached this document which provides further details on processes within the industry.

Integrated Pollution Prevention and Control, Reference Document on the Best Available Techniques for Waste Incineration, August 2006.



Hoping that this further information and clarification addresses the questions of the Committee.

Best regards,



John Daly, 20<sup>th</sup> April 2017