IS DE-NOX BY SCR TO BE THE FUTURE IN US? – TECHNOLOGY AND TENDENCIES WITHIN APC-EQUIPMENT

Bettina Kamuk
Market Director WTE, Ramboll
Waste-to-Energy Consultant
Teknikerbyen 31, 2830 Virum, Denmark
bkc@ramboll.dk, www.ramboll.com

ABSTRACT
The paper will present available De-NO\textsubscript{x} technologies as well as the paper will present the operational experience in European countries where the technology has been operating for approx. 10-15 years. The experience is based on Ramboll’s experience with NO\textsubscript{x} control on advanced WtE plants in Europe.

Technical SCR solutions will be discussed and specific technical obstacles and specific precautions to be taken will be highlighted and illustrated by showcases.

Investment and operating costs for SNCR versus SCR will be presented.

Finally it will be evaluated which effect De-NO\textsubscript{x} at WtE facilities will have compared to the energy sector in general.

INTRODUCTION
The air emission limits have over the years been tightened both in Europe and in North America. Still more efforts are given by the European Union and the US EPA to implement stricter emission limits as well as WtE facilities are implementing more efficient technology in order to get a better public acceptance and to reduce the emission of pollutants.

NO\textsubscript{x} emission has become a global problem and “hot-spots” have been identified in certain areas of US, Europe and Asia as illustrated in Figure 1.

EMISSION STANDARDS FOR WTE FACILITIES
Waste incineration produces flue gas that contains a spectrum of components (e.g. dust, acidic compounds, heavy metals, and dioxins). To avoid emission of these pollutants to the surroundings, extensive flue gas treatment (FGT) is necessary...