<p style="text-align:center">4th ICLRS June 2006</p>

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Session on Landfill Process Modelling

Report on outcomes from Session Chairs
Jim White and Richard Beaven

Discussion in the Session was led by six presentations from

Andreas Haarstrick, Technical University of Braunschweig, Germany
Vasily Vavilin, Water Problems Institute, Russia
Hiroshi Suito, Okayama University, Japan
Paul Imhoff, University of Delaware, USA
John McDougall, Napier University, UK
Jim White, University of Southampton, UK

Landfill process modellers engage in the development and application of integrated landfill degradation and transport models or components of such models. It was agreed that the efforts being made to develop a generic landfill process model platform were worthwhile. Even if such a model were never achieved the development process in itself was a fruitful activity.

It was felt that whilst it would be of value to explore the feasibility of developing the current deterministic modelling approach by enhancing it with stochastic elements and neural networks, it would also be necessary to ensure that models did not become over complex and remained fit for the purpose. Whilst some of the developmental ideas might possibly be constrained by current computing capacity, it had been clearly demonstrated in the course of the presentations that computing capacities were increasing rapidly, and that any current computing constraints are likely to disappear in the near future.

It was agreed that advances in modelling would be enhanced if there were greater co-ordination of effort, and that this could be encouraged by responding to the Modelling Challenge proposed by Richard Beaven. In this challenge modellers would be given the initial conditions of a well documented laboratory lysimeter experiment, and would be invited to predict the outcome of the experiment. Following the predictions the modellers would have the opportunity to re-run their models in the light of the actual output data. Several modellers expressed an interest in taking part in the challenge, and Richard Beaven undertook to prepare a Technical Note which would give the relevant details, and would be circulated as widely as possible throughout the international landfill modelling community.