

THE SOIL AND GROUNDWATER TECHNOLOGY ASSOCIATION

SAGTA REPORT 2 - RESEARCH ACTIVITIES AND NEEDS

The primary aim of The Soil and Groundwater Technology Association (SAGTA) is to share knowledge and experience in order to stimulate and accelerate the development of more cost-effective technologies and methodologies for managing contaminated land.

To further this aim, SAGTA held a workshop on Research into New Technologies on 28 June 1995. Other organisations attending the workshop were EPSRC and NERC as Research Councils, as well as representation from the LINK programme on Biological Treatment of Soil and Water, the EPSRC Waste and Pollution Management Programme, and the National Rivers Authority.

Across four broad industrial sectors (processing, chemical, petrochemical, materials) SAGTA identified the following general R&D needs:-

1 Validation:

- of effectiveness of bioremediation processes and natural attenuation;
- of treatment prediction models.

2 Process Prediction:

- better understanding of fundamental process behaviour (for example to achieve better process predictions for bioventing);
- detection of small changes and their prognosis for long treatment periods;
- better understanding of the bioavailability of treatment residuals and of contaminants through the treatment process.

3 Environmental Impact:

- assessment, interpretation, and communication of risk;
- risks from degradation products and the ecological impact of bioremediation and other remediation approaches;
- enhanced process monitoring techniques for in - situ treatments.

4 Applications:

- remediation of old monofill sites held by the materials industry;
- opportunities for technology transfer from related fields such as enhanced oil recovery;
- problems for chemical industry sites include mixtures of contaminants, and dealing with large areas of relatively low level contamination;
- the impact of soil heterogeneity and "made ground" conditions on in situ treatments.

5 Costs:

- reliable and easily used expert systems for cost benefit analyses;
- technologies which offered a reduction in cost by an order of magnitude compared to existing available technologies.

A number of areas for stronger and more interactive links between Research Providers and Research Users were discussed and received support:

- SAGTA is represented on the Steering Committee of the EPSRC Waste and Pollution Management programme and is willing to assist with the dissemination of research proposals for this and other programmes. SAGTA members are prepared to comment on individual research proposals, or possibly, as individual companies, to collaborate where appropriate. Often assistance in kind is easier than direct funding.
- SAGTA will actively work towards the formation of an inter-disciplinary research centre of excellence in contaminated soil and groundwater which would provide access to expertise for technology users, a concerted training support, and ideally a field scale test facility to resolve difficulties in reconciling laboratory and model based activities with field scale outcomes. We will hope to do this in collaboration with Researchers and appropriate Research Funding organisations.
- SAGTA has organised a further seminar on 1/2 February 1996 which will brought together industrial organisations, academic and related researchers, and representatives of the Government Departments and Research Programmes to address contaminated soil and groundwater issues. The broad aim will be to form a consensus on directions of future research and how industry and researchers can best work together.

It is clear that there are a wide range of issues of common interest to regulators, industry, and those involved in the underlying science and technology and these may best be discussed in the context of a 'forum' for contaminated soil and groundwater. SAGTA is prepared to take part in such a forum and to assist in clarification of the remit and role of such a body.

For further information on SAGTA please contact the Secretary of the Association Doug Laidler at douglas.laidler@atkinsglobal.com or Tel +44 01372 726140



Copyright SAGTA 2002