

## GUIDELINES FOR THE PREPARATION OF WHITE PAPER

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**Geoenvironmental Research Experience** (list projects in progress or completed within the past 5 years):

Field Performance of Waste Containment Systems (U.S. EPA)  
Slug Test Analysis for Vertical Cutoff Walls  
Effects of Inorganic Chemicals on Hydraulic Conductivity of GCLs

**Geoenvironmental Teaching Experience** (list related courses, including short courses, taught within the past 5 years):

Over a longer period of time:

Geotechnical Aspects of Waste Disposal  
Geotechnical Aspects of Waste Site Remediation

**Geoenvironmental Consulting Experience** (list major projects only):

Several dozen landfill, Superfund, and similar projects

**Appraisal of Geoenvironmental Research, Education and Practice (limit to 1-2 pages):**

Much has been accomplished. We have solved the problem of groundwater contamination from landfills. We have achieved cost-effective remediation of numerous contaminated sites. We have developed the major experimental and analytical tools necessary to assess the most important problems. Books have been written, courses developed, ASTM standards put into place, etc. The field has matured.

The practice of Geoenvironmental engineering has matured to the point of being fairly routine – the public policy issues tend now to be more challenging than the technical issues. The main need in practice is education of engineers who are knowledgeable in their highly detailed, specific work, which is increasingly difficult in an environment that places a premium on the person who can successfully navigate the broader challenges of permitting and similar issues.

In research, perhaps the biggest challenge is to continue to tackle challenging problems. We must not limit our field of view to landfills and cleanup of contaminated sites, but continue to tackle major environmental problems such as risk-based methodologies, global warming, and sustainability.

**Perspective on Emerging Geoenvironmental Issues and Technologies** (limit to 1-2 pages):

Many of the landfill research topics have matured, with some important subjects remaining for study, such as issues related to geosynthetics, long-term field performance, single- vs. double liners, linking design with risk management, education of design engineers, more flexible regulatory standards, etc. High-level radioactive waste disposal remains a huge problem. Risk-based corrective actions are also an opportunity for Geoenvironmental engineers, especially the integration of field observations and data collection with management of remediation schemes.

There are many new opportunities for Geoenvironmental engineers to play an important role, in topics such as global warming.