

# Environmental/Engineering Geologists Meeting Wednesday, December 14, 1994 The H.E.S.S. Building on Buffalo Speedway

## An Overview of Risk-Based Corrective Action (RBCA) for Petroleum Release Sites

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Presently, most states require cleanup of soil and groundwater based on generic ARAR's. Usually, little thought is given to site-specific factors which should be key in determining the appropriate level of cleanup. The use of generic ARAR's also does little to help with effective site categorization and management. This issue is exemplified by the problems associated with many state trust funds and CERCLA (i.e., little effective prioritization, rapid fund depletion). Large amounts of money are being spent to clean up sites which may pose little risk to human health or the environment. This is occurring only because many agencies have nothing to base cleanups on other than ARAR's which do not take beneficial use into account. For those states which are developing risk-based pro-

cedures, there appears to be little consistency of approach, with many of the requirements being overly conservative and difficult to implement.

In response to needs expressed by regulatory agencies and industry, the American Society for Testing of Materials (ASTM) undertook the challenge to develop a standardized approach to risk-based corrective action (RBCA) for petroleum release sites. A diverse and balanced task group was established. This group was comprised of representatives from the U.S. EPA, state regulatory agencies, state cleanup funds, environmental consulting firms, and petroleum, insurance, and banking industries. Recently, ASTM ES 38-94 "Guide for Risk-Based Corrective Action at Petroleum Release Sites" was approved as an ASTM Emergency Standard by the

ASTM Committee on Standards.

Since its formal approval (and even during the draft phase), this document has received considerable attention. Discussions regarding its incorporation into many state and local regulatory programs are currently ongoing. In addition, ASTM, U.S. EPA, and various industries are collaboratively developing awareness and training workshops related to this document. There is still, however, considerable confusion regarding the content and intended use of this standard, and how it relates to other agency and industry risk-assessment related activities. During this lecture, I will provide an introduction to the ES-38 standard and an up-to-date summary of the ongoing activities related to this document.

*ARAR, Applicable or Relevant and Appropriate Requirement*

### Biographical Sketch

Curtis C. Stanley received his degree in Geology with an emphasis in Engineering from North Carolina State University in 1979 and has been employed by Shell since. In addition to advanced geologic training at Shell, Curtis has participated in advanced hydrogeologic studies at the University of Wisconsin and the University of Waterloo.

As Shell's Staff Hydrogeologist, Curt is responsible for technical sup-

port to all organizations within the company including Manufacturing, Marketing, Pipeline, Exploration and Production, and Waste Sites. He has conducted or supervised subsurface investigations and remedial actions at over 500 locations in 43 states and several countries. Curt is currently focusing his efforts on risk-assessment technology and waste sites. He participated in the development of ES-38 and is involved in training programs across the

country.

Curt is certified through NGWA as a Certified Ground Water Professional and through AIPG as a Certified Professional Geological Scientist. He is an EPA Peer Reviewer and a member of API's Soil/Groundwater Technical Task Force, which has just finalized project GW-21 "API Decision Support System for Exposure and Risk Assessment".