Panel 2 - Storage and Cleanup: Ethanol Fate and Transport

Workshop on the Increased Use of Ethanol and Alkylates in Automotive Fuels in California

April 10 & 11, 2001

Tim Buscheck

Senior Staff Hydrogeologist

Chevron Research and Technology Company

Dissolution and Longevity of UST Source Zones - Conclusions & Implications

- In heterogeneous stratigraphic settings or fine textured soils, nonaqueous phase liquid (NAPL) source zones are subject to mass transfer limitations:
  - Source zones may be long lived, both for aromatics and MTBE
  - Source zones will be depleted of ethanol more rapidly than the aromatics and MTBE

Potential Vapor/Leachate Source: Key Points

- Ethanol vapor concentrations should be lower than MTBE vapor concentrations
- Ethanol will readily dissolve into soil moisture and be biodegraded
- Vapor/leachate sources should not result in persistent ethanol detections in groundwater as is observed with MTBE