Introductory Discussion
With the
SAB 3MRA Review Committee

Barnes Johnson
Office of Radiation and Indoor Air
August 2003
CONTEXT

- The Problem, Regulatory History, Stakeholders and Implications
  - Mixture and Derived-from Rule
  - History
  - Stakeholders/participants/interested parties
  - Tool to Promote Multimedia Environmental Management
CONTEXT

- Process, timeline, budget, personnel
- Timeline
  - 96-97 problem definition
  - 98-99 assessment strategy/model development
  - 00-01 notice/testing/peer review
  - 02-03 sensitivity/documentation/SAB
- 30-40 team members, FTE/Contract $$s
CONTEXT

• Congressional Direction
  – Appropriations Language
  – Direction to conduct overview peer review
  – Restrictions on 3MRA use
CONSIDERATIONS

• Scope and Scale of the SAB Review
  – EPA’s Strategy to Ensure the Soundness of 3MRA
    • ORD
    • Legacy Models
    • Data Acquisition
    • Peer Review
    • Independent Software Testing
    • Hands-on Software Use
  – Looking for a Holistic Overview Examination of the System and Process that EPA Used to Develop 3MRA
CONSIDERATIONS

• Implications of the SAB Review
  – We have intentionally focused the review on our specific application
• The Implications are however Broader
  – Other Uses and Applications
  – Other Agencies and research organizations are actively using the model, its components, or structure
  – Future Investment
CONSIDERATIONS

• Consider Related Efforts:
  – CalTox
  – ASTM – Risk Based Corrective Action Stds
  – Superfund Soil Screening Levels
  – TRIM
  – MEPAS etc.
CONSIDERATIONS

• What is the proper level of complexity?
  – Tradeoffs:
    • More input data,
    • More output data,
    • Difficulty with information management,
    • Better represent the environment,
    • Overall Modeling approach
    • Simulation time
CONSIDERATIONS

• Model Development is an Ongoing Process
  – No useful model is considered “finished”
    • Continual development and enhancement
  – 3MRA is no exception
CONSIDERATIONS

• Legal Standard
  – Standards used by the DC Circuit when evaluating environmental models used in rulemaking
    • “Rational Relationship”
    • “Best Available Science”
    • Deference
CONSIDERATIONS

• 3MRA allows decision-maker to consider uncertainty and control conservatism
• Explore the risk metric: unique, interesting information for decision makers, and driven by a precise problem statement
  – Spatial and Temporal Characteristics
  – No MEI – Rather Individual Risk Distributions, Weighted by Population Density
  – Handling of Subpopulations
  – Similar Handling of Ecological Receptors and Habitats
CONSIDERATIONS

- Think of the Model in Practical Terms
- Regulatory Tool
- Remember the Problem Focus
  - National
  - Multimedia
  - Individual Chemicals
  - Ecological and Human Receptors