

Multimedia Assessment for New Fuels: Public Comment Meeting



**March 27, 2006
Sacramento, CA**



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Meeting Information



- **Teleconference Information**
 - **LEADER: Bob Okamoto**
 - **USA Toll Free Number: 1-888-972-9336**
 - **PASSCODE: 33576**
- **Webcast Information**
 - **http://www.arb.ca.gov/app/calendar/cal_wbcst.php**
 - **During the meeting, questions for the panel can be sent to Onair@arb.ca.gov**
- **Draft document outline located at**
 - **<http://www.arb.ca.gov/fuels/multi/032706guidance.pdf>**



Overview



- **CA's new fuels environmental multimedia assessment**
 - Purpose
 - Regulatory Review Process
 - History
 - Ethanol
 - Lubrizol Application

- **Multimedia Assessment Application Guidance**
 - Goals
 - Strategy
 - Aspects, Advantages
 - Tiered Approach, Elements
 - Product
 - A “Living” Document



CA's Fuels Environmental Multimedia Assessment: Purpose



As required by California Health and Safety Code 43830.8:

A multimedia evaluation shall identify and evaluate any significant adverse impact on public health and the environment, including air, water, or soil, that may result from the production, use, or disposal of a motor vehicle fuel that may be used to meet the Air Resources Board's motor vehicle fuel specifications.



Regulatory Review Process



- **Multimedia evaluation shall be submitted by new fuel proponent to address the impacts associated with:**
 - Emissions of air pollutants
 - Contamination of surface water, groundwater, and soil
 - Cross media transfers (air to soil, air to water, soil to water, etc)
 - Disposal or use of byproducts and waste material
- **Multimedia evaluation shall be submitted for an external peer review**
- **Multimedia evaluation shall be submitted to the Environmental Policy Council for review and action**



Regulatory Review Process (cont'd)



- **The Environmental Policy Council shall determine:**
 - **Whether or not a significant adverse impact on public health or the environment may result from the Board's action:**
 - **If the council finds no significant impact:**
 - **Proposed regulation or application stands as approved by the Board**
 - **If the Council determines a significant adverse impact:**
 - **The Council shall recommend alternative measures to reduce or mitigate those impacts**



Regulatory Review Process (cont'd)



- **An interagency Multimedia Working Group was established to facilitate coordination among involved agencies:**
 - **California Environmental Protection Agency,**
 - **Air Resources Board,**
 - **State Water Resource Control Board,**
 - **Office of Environmental Health Hazard Assessment,**
and
 - **Department of Toxic Substances Control**



CA's Fuels Environmental Multimedia Assessment: History



- **Ethanol**
- **Lubrizol application, 2003-4**
 - **Comprehensive application**
 - **Two peer review groups**
 - **Experimental re-design**
 - **Some unique aspects**
 - **Environmental Policy Council approved multimedia evaluation with conditions**
- **Regulatory post-approval consideration**
 - **Lessons learned**
 - **Goals in revising process**



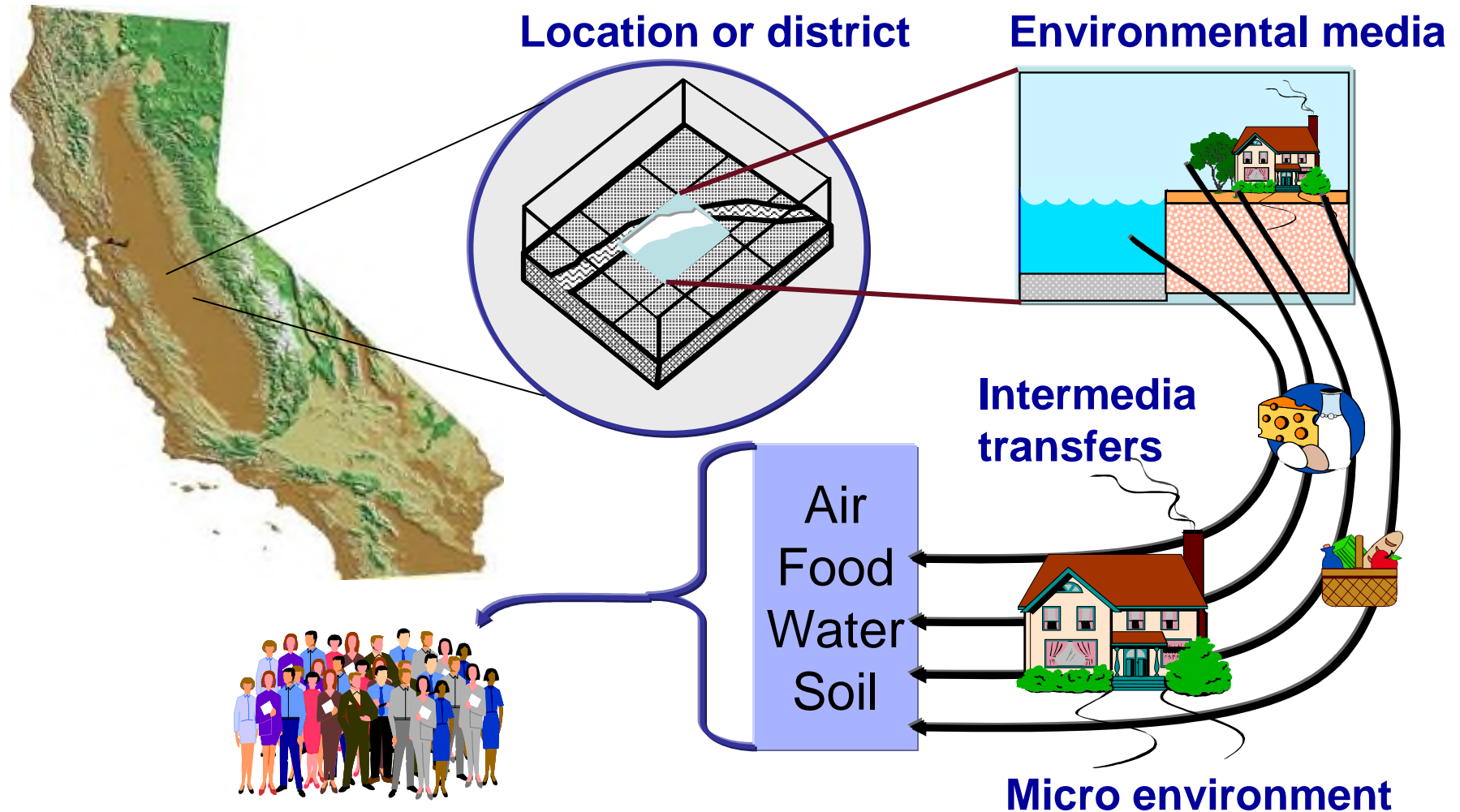
Multimedia Assessment Application Guidance: Goals



- **Streamline process**
- **Reduce uncertainty / costs**
- **Facilitate a consistent multimedia approach**
- **Honor unique aspects of new fuels**
- **Clarify**
 - **Risk assessment questions**
 - **Protocols for addressing them**



Multimedia Framework



Population Exposure & Risk

March 27, 2006

UCRL-AR-219776



Multimedia Assessment Application Guidance: Strategy



- **Strategy Drawn from Needs:**
 - to accommodate unique features (chemical, potential impacts)
 - customized additional testing for nonexistent information
 - to reduce uncertainty in cost estimation for applicant
 - to reduce chance of “barking up the wrong tree”
 - for ongoing peer review as decisions are made
 - to accommodate relative risk assessment between proposed fuel / additive and appropriate standard reference fuel



Multimedia Assessment Application Guidance: Tiered Approach



- **Therefore, a Tiered Approach:**
 - **Three sequential tiers during application process**
 - **Increasing in resolution, specificity, cost, risk assessment**
 - **Feedback at each tier**
 - **A staged or tiered risk-based approach allows information required for the decision making process to be provided in a focused and timely manner, while acknowledging:**
 - **the complexity of the issues, and**
 - **the likelihood that there will be significant uncertainties at the completion of the multimedia assessment**



Tiered Approach



Tier 1 Preliminary Review

- Define framework and approach
- Identify information needs and gaps
- Peer review



Tier 2 Multimedia Risk Assessment Design Review

- Experimental design developed and submitted
- Design peer reviewed, feedback provided for Tier 3

- Final report is used as the basis for recommendations submitted to the Environmental Policy Council
- Final report is peer reviewed



Tier 3 Final Multimedia Risk Review



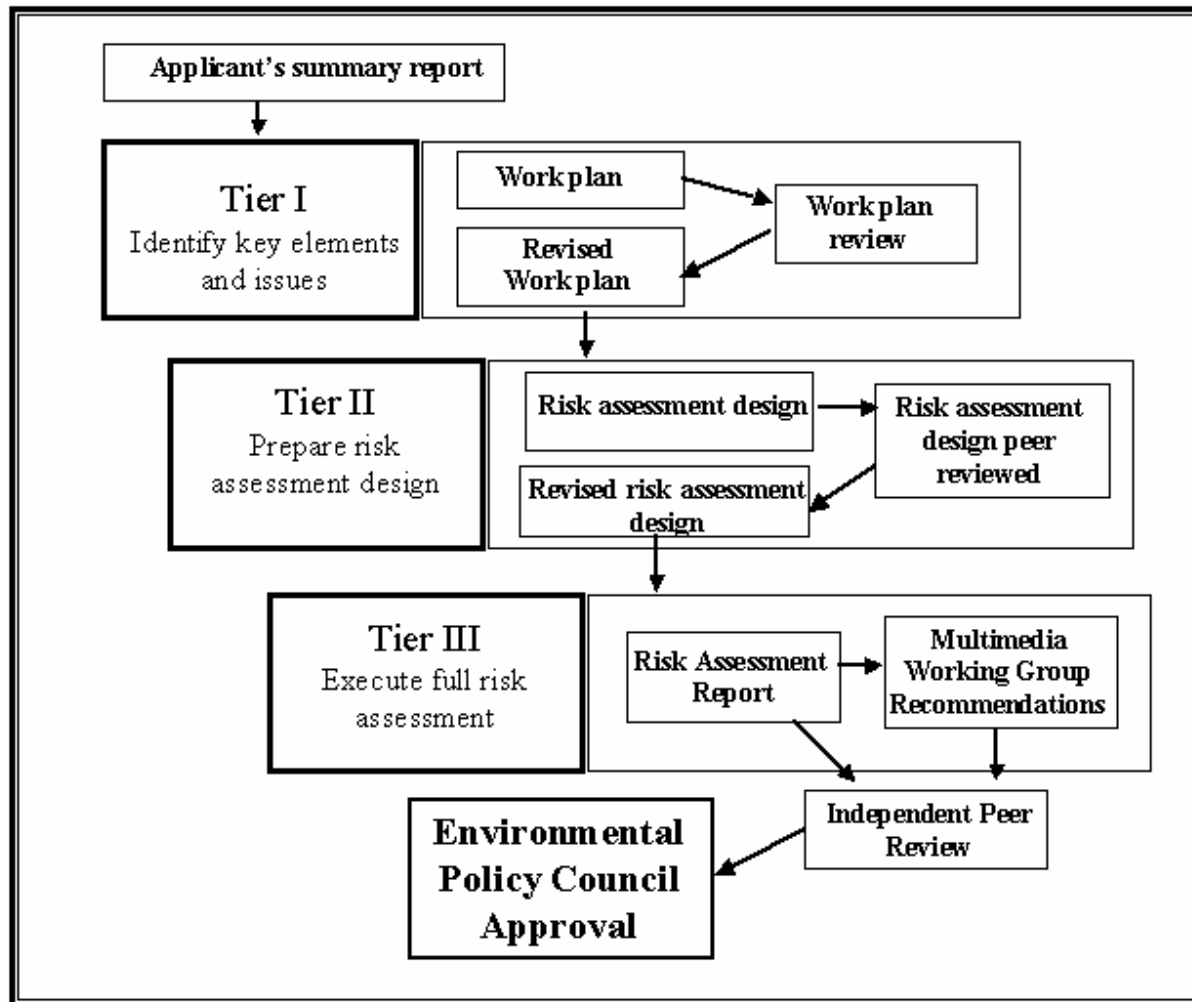
Tiered Approach



| | Fuel Applicant | Multimedia Working Group | Peer Review |
|----------|---|--|--|
| Tier I | Fuel Background Summary report <ul style="list-style-type: none"> • Chemistry • Release scenarios • Environmental behavior | Screens applicant and establishes key risk assessment elements and issues | Technical peer review consultation of Tier I Work Plan including key risk assessment elements and issues |
| | Mutually-agreed upon Tier I Work Plan to proceed through multimedia evaluation | | |
| Tier II | Risk Assessment Design report | Comment on Risk Assessment Design | Technical peer review consultation of Risk Assessment Design |
| Tier III | Execution of Risk Assessment and preparation of Multimedia Risk Assessment report | Prepare recommendations to the Environmental Policy Council based on Multimedia Risk Assessment report | Independent peer review of Multimedia Risk Assessment report and Working Group recommendations |



Tiered Approach





Tiered Approach: Advantages



- **Key issues and uncertainties associated with a new fuel are identified early so efforts to address these concerns are focused**
- **Peer review is ongoing so the overall process has few surprises at the end for either the State or the new fuel proponent**
- **A new fuel proponent can better gauge “when to hold’em and when to fold’em” during the overall process**



First Tier: Preliminary Review Elements



Proponent provides:

- **Summary of regulatory approvals**
- **Background fuel information**
 - Fuel modifications/characteristics
 - Chemical composition
- **Summary of manufacture, transportation, and storage of fuel and components**
- **Historical use of fuel components or additives**



First Tier: Preliminary Review Elements (cont'd)



Proponent provides:

- **Physical and chemical and environmental toxicity**
- **Summary of likely release scenarios**

Proponent and Multimedia Working Group identify:

- **Information necessary for Risk Assessment Design (Tier 2)**
- **Key elements to be used as basis for the risk assessment**
- **Work Plan to complete multimedia evaluation**
- **Identify reference fuel for relative risk assessment**

Peer Review consultation before moving to Second Tier



Second Tier: Risk Assessment Design Elements



Proponent provides:

- **Proposed Experimental Design for risk assessment**
 - **Scope and data**
 - **Comparisons to agreed upon base fuel**
 - **How will knowledge gaps be addressed**
 - **Methodology to be used during analysis**
 - **Fate and transport conceptual models**
 - **Description of planned experiments**

**Multimedia Working Group and Peer Review
consultation before moving to Third Tier**



Third Tier: Final Multimedia Risk Assessment Elements



Proponent Provides:

- **Summary of first two Tier activities and results**
- **Results of Multimedia Risk Assessment**
- **Comprehensive report including results from models and experiments regarding:**
 - **Impact from likely release scenarios**
 - **Exposure pathways**
 - **Fate and transport mechanisms**
 - **Bioaccumulation**
 - **Exposure to human, resource, and ecological receptors**
 - **Risk determination uncertainty**
 - **Waste management issues**

Multimedia Working Group's recommendations receive Final Independent Peer Review before submittal to Environmental Policy Council



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