Proposed Near-Term Options for Benefits Assessment

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Some Thoughts About Benefits Assessment Options

- Roadmap presents options that EPA is considering for estimating benefits from air toxics reductions in near-term
- We recognize that these options are not mutually exclusive
- We acknowledge that it matters how information would be used by decisionmakers

Near-term Options in Roadmap

- Describing air toxics benefits qualitatively;
- Using existing methodologies to sketch out minimum benefits from a national perspective;
- Using the National Air Toxics Assessment (NATA) or other tools to pursue national, regional or local analysis focusing on reduction of individual risk levels;
- Estimating benefits of air toxics in conjunction with criteria air pollution program; and
- Expanding benefits assessment efforts to include equity considerations

Qualitative Benefits

- Focus on describing benefits qualitatively
  - Pros: For some rules that do not require quantified benefits (e.g., because of regulatory mandate), EPA would not need to put effort into incomplete, uncertain estimates to make the case for regulation
  - Cons: Not quantifying benefits may lead to an overall underestimation (e.g., some may assume that benefits are negligible rather than unquantifiable)

Using existing methodologies

- EPA could build on efforts described in panels (e.g., benzene, lead, acrolein methodologies)
  - Pros: Uses peer-reviewed work that focuses on toxics we believe are driving the majority of risk
  - Cons: Does not address hot-spot or equity issues. May be interpreted as total benefits rather than lower bounds of benefits

Using NATA

- EPA could use NATA or other tools to analyze reduction of individual risk levels (e.g., analysis for 2007 Mobile Source Air Toxics Rule)
  - Pros: Allows us to look at multiple pollutants together and look across geographic areas to estimate impacts on individual risk levels\
  - Cons: Difficult to quantify the full distribution of exposure and risk nation-wide, exposures in key microenvironments or sub-chronic health effects

Co-Benefits with Criteria Air Pollutant Program

- EPA could use modeling for criteria pollutant program to estimate concentrations of air toxics for benefits assessment, given that many toxics are also VOCs and PM.
  - Pros: Makes use of state-of-the art modeling and provides consistent framework for integrating analyses.
  - Cons: Without concentration-response functions, approach would still not provide quantified health impacts or benefits. Scale of air quality modeling may not capture hot spots well and may therefore underestimate concentrations of toxics

Equity Considerations

- EPA could expand assessment efforts to include measurements of inequality to understand tradeoffs between health benefits and equity (e.g., Jonathan Levy's presentation)
  - Pros: Provides more detailed explanation of who is exposed to toxics and where potential gains in health benefits may be greatest.
  - Cons: Looks only at health effects and not net benefits of toxics reduction.

Discussion Questions

- What are the strengths of the various approaches?
- What the weaknesses of the various approaches?
- Roadmap also includes table (p. 19) that attempts to compare across options, considering: number of toxics that could be evaluated, health endpoints, toxicity data required, and exposure data needs
  - Is it helpful?
  - What's missing or inaccurate?
  - Other suggestions or preferences?