
Introduction to the Integrated Science Assessment and Risk and Exposure Assessment

Presentation to CASAC
July 30, 2008

Purpose of the Integrated Science and Risk/Exposure Assessments

- **The intent of the ISA is to:**
 - Evaluate and synthesize the entire body of scientific literature, both methods and results to develop an integrated, generally qualitative assessment designed to inform central policy-relevant issues.
- **Risk and Exposure Assessments:**
 - Quantitative assessments of public health risks, human exposures, and/or risks, exposures, and impacts on the environment

Integrated Science Assessments

- Development of ISAs includes:
 - Identification of potentially relevant studies
 - Capturing information in a database (under development)
 - Maintaining knowledge base in several key disciplines
- ISAs evaluate, integrate and synthesize the scientific evidence to inform the most policy-relevant issues
- ISAs draw judgments, as appropriate, about:
 - Exposures and effects of concern
 - Weight of evidence for causality for health or environmental outcomes as a result of relevant exposures
 - Quantitative information for important outcomes:
 - Concentration-response or dose-response relationship
 - Levels and exposure durations of concern
 - Specific studies that may be most useful in risk assessment

Risk and Exposure Assessment (REA)

■ First Draft:

- Assesses exposures and risks considering current air quality and air quality simulated to just meet the current standards
- Draws upon health information and conclusions in the 1st and 2nd drafts of the ISA
 - Judgments on causality for health outcomes
 - Identification of key studies
 - Identification of susceptible and vulnerable populations
 - Quantitative information relevant for assessment (e.g. concentration-response relationships)

■ Second Draft:

- Assesses exposures and risks associated with any potential alternative standards that may be under consideration
- Draws upon health information and conclusions in the final ISA relevant to the REA
- Informed by comments from CASAC and the public on the first draft of the document

■ Final Risk and Exposure Assessment:

- Informed by comments from CASAC and the public on the second draft of the document
- Considered alongside the health information in the final ISA to inform the rulemaking process

Schedule for Current SO₂ NAAQS Review

Major Milestones		Projected Completion Date	Projected CASAC Review Date
Integrated Review Plan	Draft	April 2007	May 2007
	Final	October 2007	
Integrated Science Assessment	First Draft	September 2007	December 2007
	Second Draft	May 2008	July 2008
	Final	September 2008	
Risk/Exposure Assessment	Plan	November 2007	December 2007
	First Draft	July 2008	July 2008
	Second Draft	October 2008	December 2008
	Final	January 2009	
Policy Assessment/Rulemaking	ANPR	February 2009	April 2009
	Proposed	July 2009	
	Final	March 2010	

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*Indicates that a single CASAC meeting will address both documents