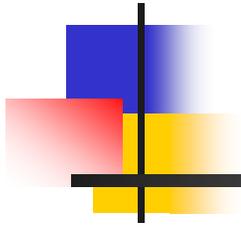
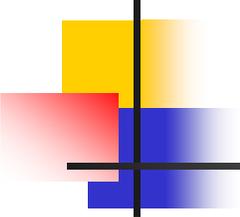


# Risk and Technology Review for the National Emissions Standards for Air Toxics



Presentation for the  
Clean Air Act Advisory Committee (CAAAC)  
Economic Incentives and Regulatory  
Innovation Subcommittee  
Meeting  
January 11, 2011

Point of Contact: Chuck French, U.S. EPA



# Outline and Purpose

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- Provide brief summary of the Clean Air Act requirements for air toxics
- Describe what EPA considers in the Risk and Technology Reviews (RTRs) of the Emissions Standards
- Provide brief summary of the status and schedule of the RTR Program

# What Does the Clean Air Act Require for Air Toxics?



- Identify significant source categories of emissions and develop technology-based standards for each category
  - These standards are commonly known as Maximum Achievable Control Technology, or MACT standards
  - Based on performance of the best facilities
- Every 8 years after MACT standards are developed, we must perform a “Technology Review” for the MACT standards.
- Within 8 years of the MACT standard, we must also perform a “Risk Review.”

# What is Involved in the Technology Review?



- We search for and evaluate advances in practices, processes and control technologies.
- If we identify cost-effective approaches to further reduce emissions, we revise the MACT standards as appropriate.
- At the same time that we conduct the technology review, we also assess the MACT standard to:
  - Address significant unregulated emission points
  - Require consistent monitoring and add electronic compliance reporting
  - Fix administrative requirements that are duplicative or inconsistent

# What is Involved in the Risk Review?

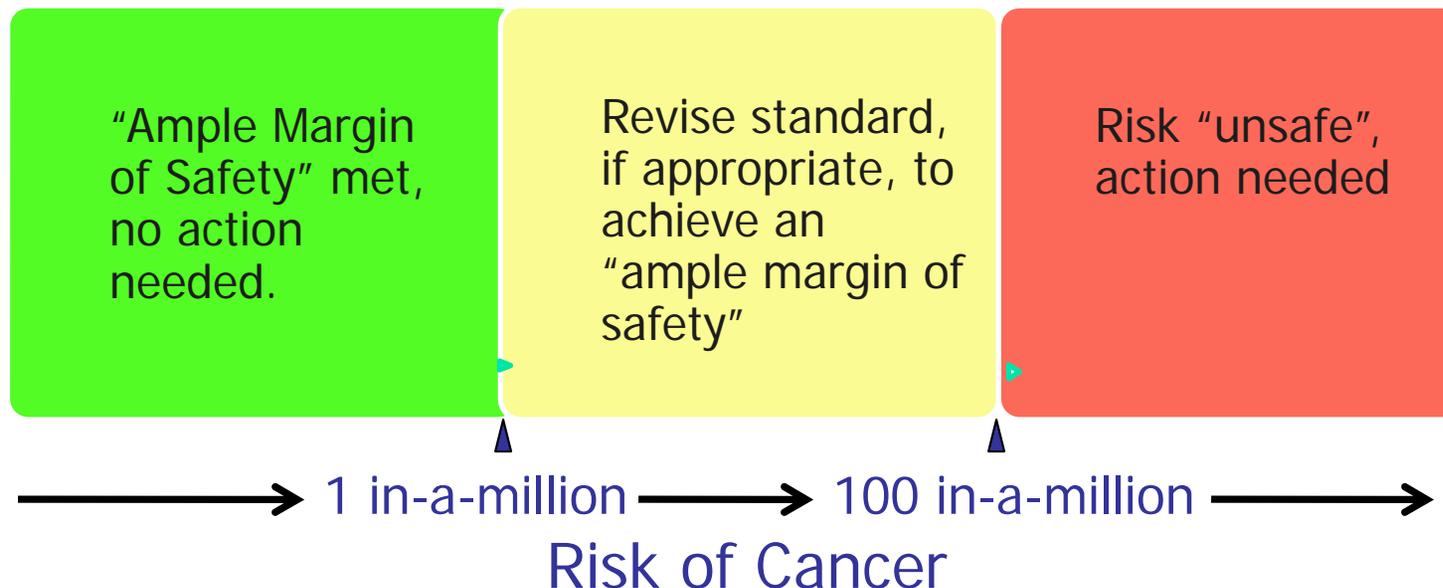


- We assess the remaining risks due to air toxics emissions after implementation of the MACT standards, and revise the standards, if appropriate.
- To assess risks we gather data on emissions, processes and facilities, and apply models to estimate:
  - Cancer risks
  - Chronic non-cancer risks
  - Acute non-cancer risks

# What is the Decision Framework for Cancer Risk?

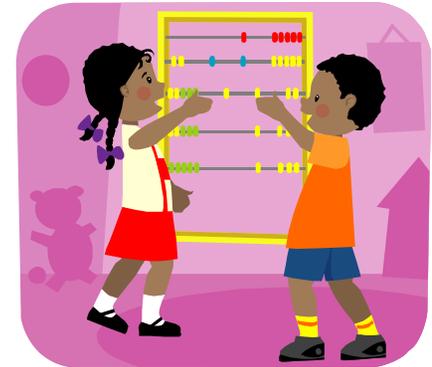
We follow a 2 step approach:

- If the risk of cancer is greater than about 100 in-a-million, risks are not “acceptable” and must be reduced irrespective of costs.
- If risk is less than 100 in-a-million but greater than 1 in-a-million, we assess available controls and, if cost-effective, propose action to reduce risks



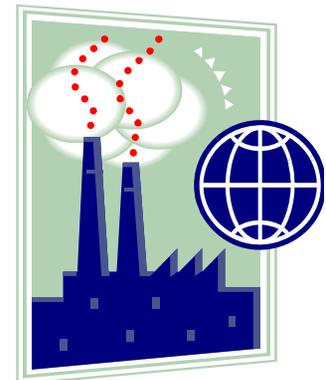
# What Other Health Factors Do We Consider When Making RTR Decisions?

- What is the likelihood of adverse noncancer effects?
- What are the uncertainties and degree of confidence in:
  - Emissions and source data?
  - Health data and toxicity values?
- How conservative are the risk estimates?
- What are the overall facility-wide risks?
- Are there disparate demographic risks?
- Are there higher risks for sensitive subpopulations (e.g., children, subsistence fisher populations)?



# What Other Factors Do We Consider When Making RTR Decisions?

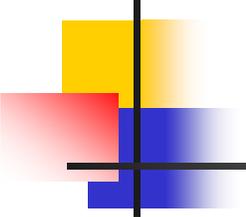
- How much reduction in risks would each of the control options achieve?
- What are the costs compared to total revenues?
- Impacts to small businesses?
- Will the controls achieve co-benefit reductions of other pollutants (e.g., criteria air pollutants)?
- Are there disadvantages of these controls such as increases in other types of pollution
  - formation of nitrogen oxides by thermal oxidizers?
  - creation of greenhouse gases?
  - impacts to other media?



# Interaction Between Risk Review and Technology Review

- For both the risk and technology reviews, we evaluate control options.
- In most cases, we have flexibility in how we revise MACT standards.
- After evaluating control options for both reviews, we choose options that are cost-effective and reduce risks and risk disparities the most.





# RTR and Sector Approaches

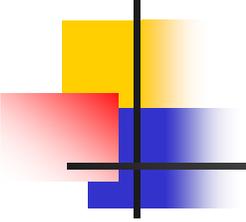
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- RTR is part of EPA multi-pollutant sector approaches.
- RTR is done in parallel to other EPA statutory activities such as NSPS and CTGs reviews.
- Combining RTR with multi-pollutant sector approaches allows for:
  - More informed data collection;
  - Aligning of regulatory development timelines;
  - Consideration of all pollutants in standards development and all emission points;
  - Consolidation of requirements when possible; and
  - Consistency in monitoring, testing and reporting requirements.
- This approach does not mean only one rulemaking.

# General RTR Status



- We are required to perform RTR for about 96 standards.
- RTR has been completed for 12 standards.
- Suit filed by Sierra Club on January 14, 2009 because EPA missed deadlines for 28 source categories.
- We have negotiated schedules, but are still waiting for final decision by the Court.
- Current schedule is to complete RTR for most of these 28 categories over the next 1-3 years.
- For some priority categories (e.g., steel production, and oil & gas production), we plan to do the RTRs in the context of sector projects.



## For More Information

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- RTR website:
  - <http://www.epa.gov/ttn/atw/rrisk/rtrpg.html>
- Contact Chuck French
  - Email: [French.chuck@epa.gov](mailto:French.chuck@epa.gov)
  - Phone: 919-541-7912

Thank You!