National Air Toxics Program: Second Integrated Urban Air Toxics Report to Congress

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Overview

- Section 112(k) Requirements and Purpose
- Urban Air Toxics Strategy
- Organization of Report
- Standards and Initiatives
- Progress
- Status of Report and Next Steps

Section 112(k) Requirements

- S112(k)(1) – Area Source Program
  - Achieve a substantial reduction in emissions of hazardous air pollutants (HAP) resulting in a 75% reduction in the incidence of cancer
- S112(k)(3) – National Strategy
  - Develop strategy of specific activities and schedule
- S112(k)(5) – Report to Congress
  - Report on actions taken under section 112(k) to reduce the risk to public health from area sources
    - First report released in 2000
  - Identify specific metropolitan areas that continue to experience high risks to public health from area source emissions
    - Possible area of focus in the future

Integrated Approach to Urban Strategy

- EPA published the Integrated Urban Air Toxics Strategy in 1999
  - Discussed a framework to address emissions from area, major and mobile sources to address concerns of cumulative public health risks in urban areas
  - Described an integrated approach consisting of four key components:
    - Source-specific standards and sector-based standards
    - National, regional, and community-based initiatives
    - National air toxics assessments
    - Education and outreach

Organization of Report

Chapters & Appendices	Description
1 – Introduction and Background	Info on the strategy, list of 30 HAPs, area source categories, and report overview
2 – Standard-Setting Activities	Standard setting activities for stationary and mobile sources
3 – Identify Air Toxics Risks in Urban Areas	Range of assessment activities undertaken to measure progress toward meeting section 112(k)
4 – National, Regional, and Community-Based Initiatives	An overview of national, regional, and community-based projects and approaches taken to develop partnerships
5 – Education and Outreach	Update on education and outreach efforts
6 – Research to Address Knowledge Gaps	Sampling of research projects to highlight progress in addressing research needs identified in first report.
7 – Conclusions and Looking Ahead	Summary of key findings and areas where continued effort is needed
App A – Standard-Setting	Details on the standard-setting activities
App B – Air Toxics Assessments	Supplemental details on the urban HAP trend analysis and the NATTS monitoring network
App C – Urban Air Toxics Studies	Summary of several air toxics studies
App D – IRIS Status	Summary of current status of IRIS assessments

Multiple Tools Used to Analyze Program

- Used a *variety* of methods to analyze different aspects of the air toxics program:
  - Estimated emissions reductions, due to promulgated standards, determine national reductions
  - Monitoring data for urban ambient air to focus on several key pollutants
  - Modeling tools, such as the 2005 NATA, to identify certain areas of the country that may experience significantly higher levels of air toxics risks

Have Completed Requirements for Many National Air Toxics Standards

- For stationary sources have issued:
  - Rules for 68 area source categories, representing 90% of the worst urban HAPs - 112(k)
  - 97 maximum achievable control technology (MACT) standards covering all 174 major source categories - 112(c)
  - Standards for sources of 7 specific bio-accumulative toxic pollutants (112(c)(6)) and solid waste combustion sources (129)
  - To date, conducted risk reviews for 15 MACTs covering 27 categories -112(f)

- For mobile sources have issued:
  - Rule in 2007 to reduce air toxics from gasoline-fueled passenger vehicles, gasoline fuel and portable fuel containers
  - Many rules to reduce VOCs, including gaseous air toxics, and diesel particulate matter, from a range of on- and off-road gasoline and diesel vehicles and equipment

National Standards Cannot Address All Local "Hot Spot" Concerns

Initiated/supported a number of community-based programs to address local concerns:

Community–based Programs	Focus	Resources
Community Air Risk Reduction Initiative (CARRI)	Enabled communities to better understand local issues.	Awarded $4M to over 30 communities between 2001 and 2005
Community Action for a Renewed Environment (CARE)	Implements local solutions to minimize public health risks.	Over $16M and 100 grantees between 2005 and 2011
Community-Scale Air Toxics Ambient Monitoring Grants	Assist state, tribal, and local communities to identify sources and characterize the problem.	Over $22.6M between 2003 and 2011
Sustainable Skylines & 7th Generation Tribal Initiatives	Assist communities and tribes to build partnerships to reduce emissions & achieve sustainability	$1M awarded to 6 communities and 3 tribes between 2007 and 2010

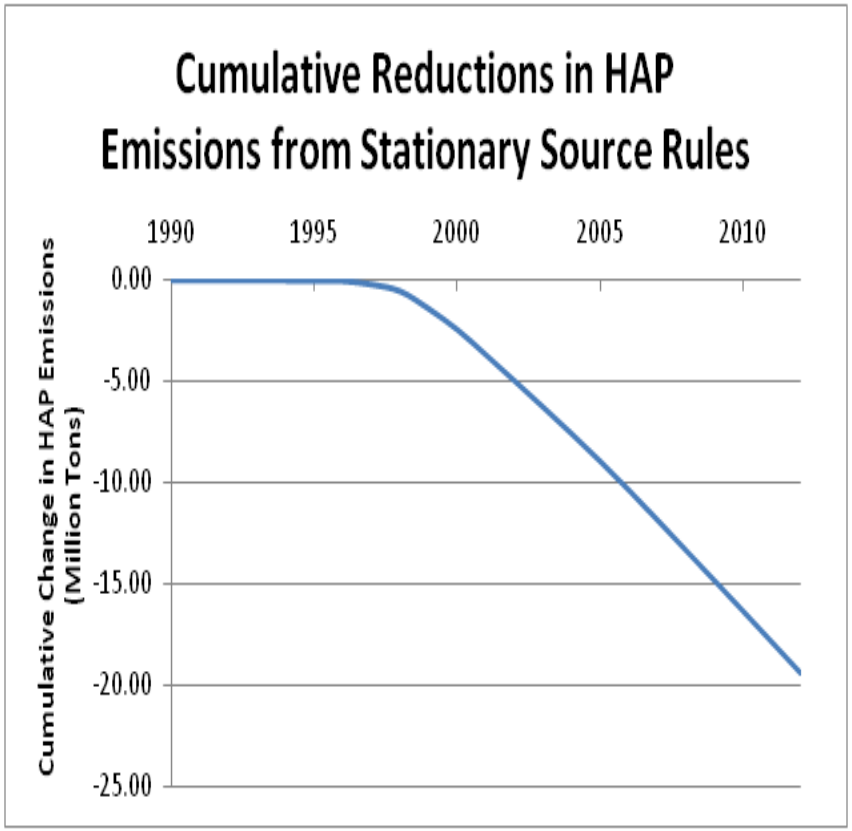
National, Regional and Mobile Source Initiatives Have Helped Reduce Emissions in Urban Areas

- National/Regional Initiatives:
  - ***Wood Smoke Program*** has reduced wood smoke emissions by replacing nearly 24,000 stoves & fireplaces resulting in nearly 63 tons of HAPs and 370 tons of PM from the air annually (2007 through 2011).
  - ***Collision Repair Campaign*** helped autobody shops reduce harmful HAP, VOC, and PM emissions, particularly in urban areas.

- Mobile Source Initiatives:
  - ***National Clean Diesel Campaign*** promotes clean air strategies by working with manufacturers, fleet operators, and state/local officials. Program provided over $500M in grants between 2008 and 2011 and is expected to achieve significant PM and NO_x reductions.
  - ***SmartWay*** transport partnership is a collaborative program between EPA and the goods movement sector to increase the energy efficiency and energy security of our country while significantly reducing air pollution (over 9,000 tons of PM to date).

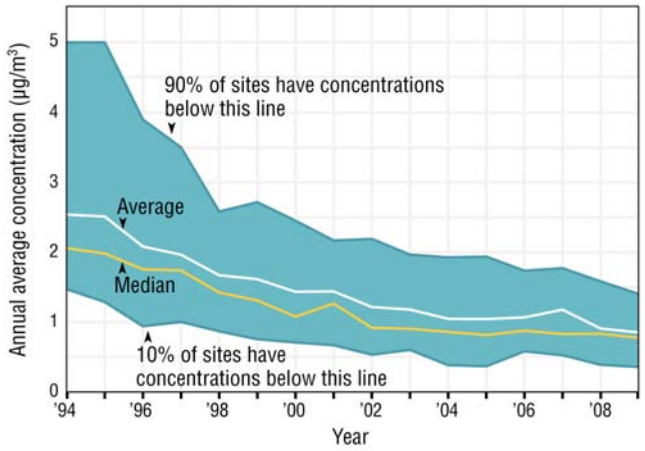
National Emissions Reduced Significantly Since 1990

- For **stationary** sources
  - Over 1.5 million tons/year of HAPs removed from air
  - Little less than 3 million tons/year of non-HAP co-benefit reductions achieved
- For **mobile** sources
  - About 50% lower with regs already in place
    - Expect 80% less than 1990 by 2030 due to fleet turnover



Air Toxics Monitoring Data Show Key Pollutants Are Declining

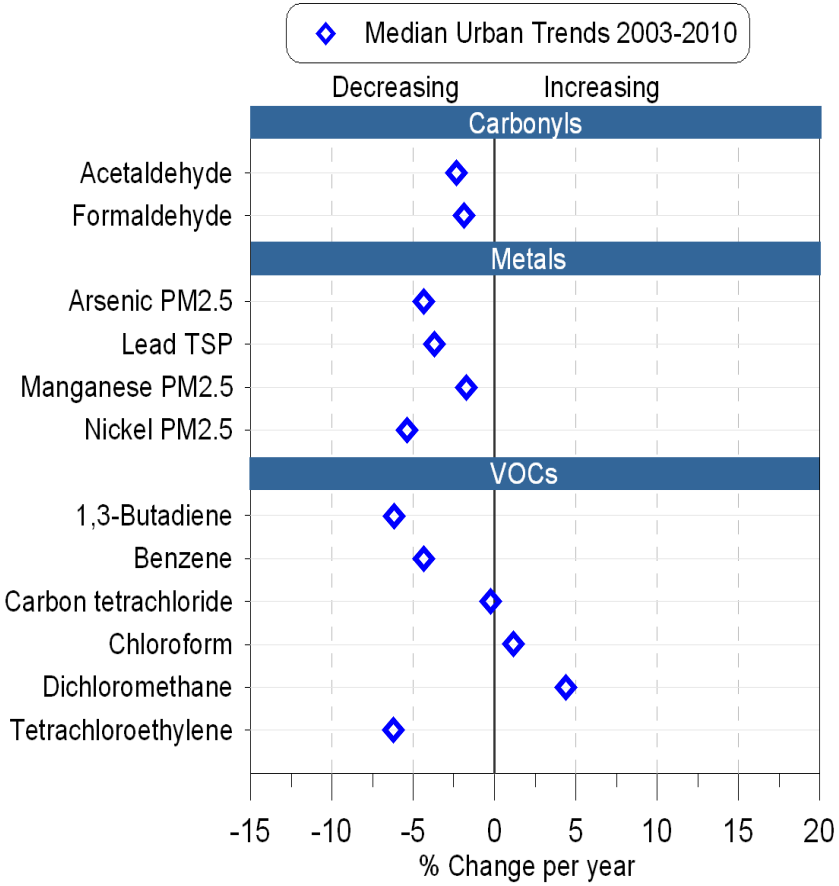
- Ambient monitoring data show that some of the toxic air pollutants which are of greatest concern to public health in urban areas are declining
  - Benzene levels have declined by 66% from 1994 to 2009



[a]**Coverage:** 22 monitoring sites nationwide (out of a total of 339 sites measuring benzene in 2009) that have sufficient data to assess benzene trends since 1994.

Data source: *U.S. EPA, 2010*

- Data from 30 urban sites (2003-2010) show decline for key pollutants except for two



Urban Areas With Elevated Cancer Risk

- Section 112(k)(5) requires EPA to identify metropolitan areas that continue to experience high risk to public health from area source emissions

- The 2005 NATA estimates more than 13.8 million people in 61 urban locations were exposed to elevated cancer risks
  - These areas include at least one census tract with an estimated lifetime cancer risk greater than 100 in a million

Status and Next Step

- OMB Review
  - No deadline for how long OMB can take to review

- OAR reviewing report and discussing future implementation of toxics program