

# State Air Toxics Programs -An Overview

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# A Brief History of the Federal Air Toxics Program

Federal attempts to regulate air toxics prior to 1990:

## **NESHAPS** - National Emission Standards for Hazardous Air Pollutants

- Identify those pollutants that caused “serious and irreversible illness, or death”
- Develop standards to reduce emissions to levels that provided an “ample margin of safety”

## **The NESHAPS Debate:**

- How valid are EPA's risk assessment methods and assumptions?
- Costs to industry?
- Benefits to human health?
- How safe is safe?

# Federal NESHAPs Program

In 20 years, NESHAPs were developed for 7 HAPs:

- **Asbestos**
- **Benzene**
- **Beryllium**
- **Inorganic arsenic**
- **Mercury**
- **Radionuclides**
- **Vinyl chloride**

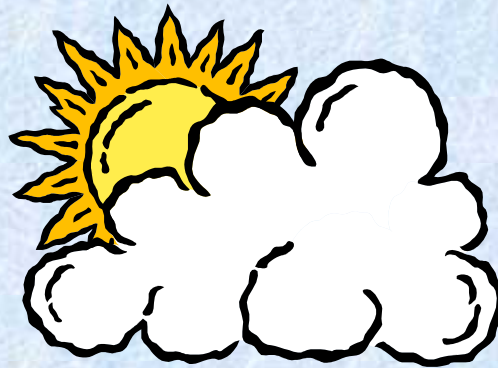
## **The Clean Air Act Amendments of 1990**

- Listed 188 “Hazardous Air Pollutants”
- EPA must develop emission limits for specific source categories using “Maximum Achievable Control Technology (MACT)”
- Then go back and look at residual risk

Meanwhile, in the 1980s:

## **Emergence of State Programs**

Legislation, regulations, policies



# Emergence of State Programs

## Defining “air toxics”:

- Began with focus on exposure to carcinogens
- Expanded to include noncarcinogenic and even short-term effects

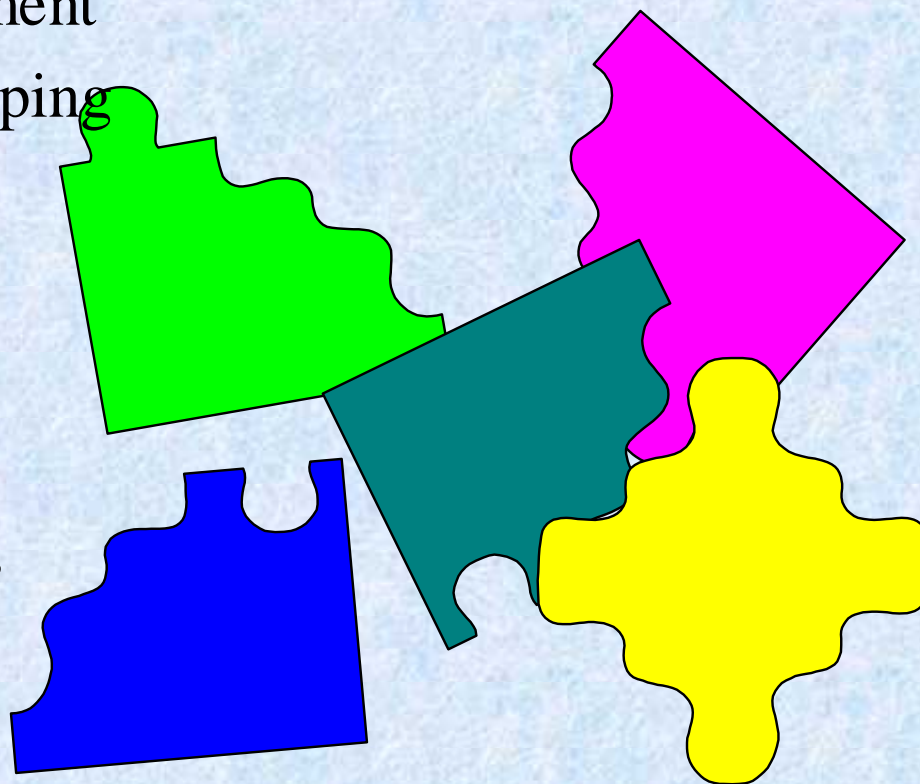
## What is an “Air Toxic”?

- CAAA 188 HAPs
- State lists:
  - California TACs (54 + 600 + 188)
  - New Hampshire RTAPs (750)
  - Oklahoma “toxic air contaminants” (1500)
  - NJ - Anything with a toxicity value?



# Components of State Air Toxics Programs

- Permits, controls, emission limits for stationary sources
- Compliance and enforcement
- Reporting and record-keeping
- Emissions inventories
- Modeling
- Risk assessment
- Monitoring
- Area source requirements
- Mobile source programs
- Community participation



# Point Source Strategies

Point/major/stationary sources were the first, most obvious targets for state air toxics programs

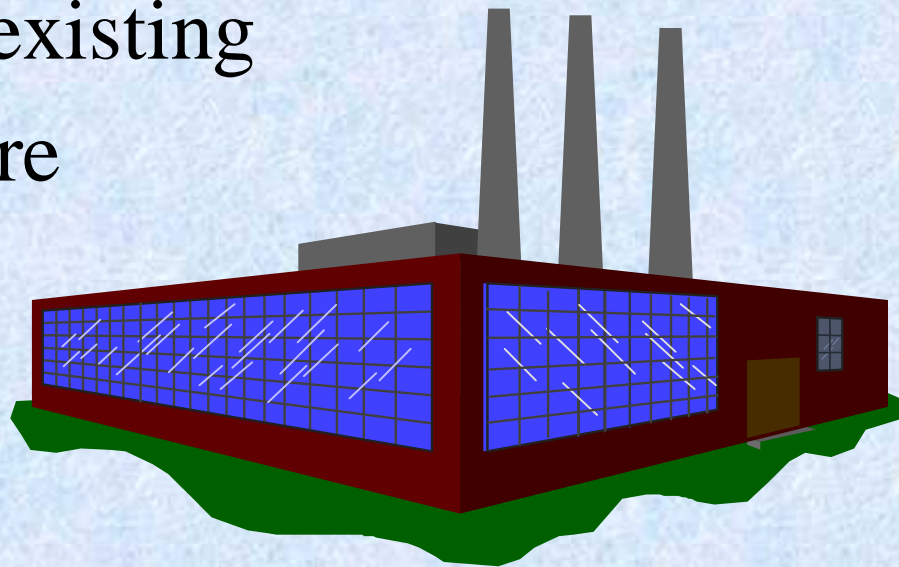
Minimalist approach:

- Implement NESHAPs - about 20 states do this.

# Permits and Registration for Point Sources

## Considerations:

- Size, category, location
- New, modified, existing
- Risk and exposure



# Stationary Source Control Requirements

- Emission limits
- Control equipment requirements:
  - MACT (Maximum Achievable Control Technology)
  - BACT (Best Available Control Technology)
  - RACT (Reasonably-Available Control Technology)
  - LAER (Lowest Achievable Emission Rate)
  - SOTA (State-of-the-Art)
- Varying requirements that consider toxicity, potential emissions, and potential exposure

# Compliance Approaches

- Inspections, documentation, stack tests
- Control equipment requirements
- Emission standard or limit
- Ambient air standards
- Risk standards or targets



# Emissions Inventories

- State regulatory requirements for process-specific reports
- TRI (Toxics Release Inventory)
- NEI (National Emission Inventory)
- Emissions statements

# Facility Modeling

- To meet ambient standard
- To meet risk goal or standard
- Background concentrations?
- Facility-wide or process-specific?



# Risk Assessment Approaches

Toxicity values:

- IRIS (EPA's Integrated Risk Information System)
- California's toxicity values
- TLVs (Occupational Threshold Limit Values)



# Risk Assessment Approaches

Applied in different ways:

- To develop lists of chemicals
- To develop lists of industries of concern
- To encourage facilities to reduce risk
- To determine if controls are stringent enough

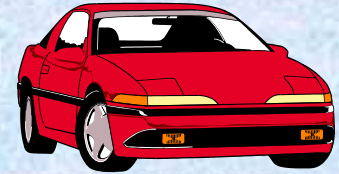
# Air Monitoring

- No real federal requirements
- Federal Urban Air Toxics Monitoring Program (UATMP) - run cooperatively with states, with 56 sites in 20 states at 30 urban areas
- Over 300 air toxics monitoring sites are operated by states

## Area/Minor Source Approaches

- Dry cleaners, electroplaters, gasoline stations
- Some are subject to MACT
- Performance standards, compliance reports
- Consumer product regulations - side benefits from ozone regulation

## Mobile Sources - Cars



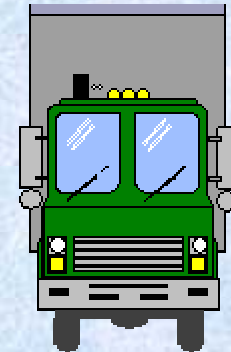
- More side benefits from reduction of criteria pollutants
- California leads the way - Requirements for low emissions and clean fuels
- Northeast states adopting some California initiatives (low emission vehicles)
- Inspection and maintenance programs

## Mobile Sources - Diesel

EPA's new regulations requiring better controls will be in effect by 2007, but old fleet will still be on the road.

States are looking to reduce emissions now:

- Cleaner fuel
- Engine retrofits
- Idling reduction
- Truck stop electrification



# Future Directions

- Continued focus on area and mobile sources
- Community involvement
- EPA funding for community initiatives
  - NJ's community project

