Welcome to the 2011 Air Toxics Monitoring & Data Analysis Workshop

April 4-7, 2011
Dallas, Texas

Overview of the Workshop

- Monday - Training Sessions
  - 2005 NATA
  - How to develop a successful air toxics monitoring project
- Today – Overview / Big Picture Issues
  - Air Toxics Strategy
  - NATTS
  - BP Oil Spill
  - Regions, States, Locals, Tribes
  - Future of Air Toxics Discussion*
- Wednesday – Technical Sessions
  - Specific topics
  - Breakout sessions from Future discussion
- Thursday – Panels & report outs
  - Oil & Gas, Mercury
  - Future discussion report out and next steps

Air Toxics Strategy to Protect Communities

We have an opportunity to improve the way we address air toxic emissions impacting communities . . .

The Air Toxics Problem

- Toxic air pollutants cause or are suspected of causing cancer, birth defects, reproductive effects and other serious health problems.
- Toxic emission sources are often clustered in urban areas and areas already facing other air quality challenges.
- Low income, minority, and indigenous populations often bear a disproportionate share of the health impacts.

Our Strategy to Address the Problem:

- Targets priority categories of emission sources;
- Allows EPA to regain control of the issue based on public health concerns, rather than by court-ordered schedules driven by lawsuits; and
- Brings to bear a wide array of regulatory, monitoring, public outreach and enforcement tools.

Air Toxics with Greatest Risks Nationally

- The air toxics* with the greatest risks from inhalation include:
  - Acrolein (mobile sources, combustion, open burning)
  - Arsenic (combustion, non-ferrous metal production, iron and steel, incineration, mobile sources)
  - Benzene (mobile sources, combustion, oil and gas production and distribution, petroleum refining and distribution)
  - 1,3-Butadiene (mobile sources, chemical manufacturing, petroleum refining and distribution)
  - Chlorine (primary magnesium refining, incineration, combustion)
  - Chromium, hexavalent (electroplating, non-ferrous metal production, iron and steel, mobile sources)
  - Coke Oven Emissions (iron and steel)
  - Diesel exhaust (mobile sources)
  - Formaldehyde (mobile sources, combustion, plywood, pulp and paper, oil and gas production and distribution)
  - Hydrogen Chloride (combustion, incineration)
  - Manganese (iron and steel, non-ferrous metal production, combustion)
  - Perchloroethylene (dry cleaning, solvent use)
  - Polycyclic Organic Matter (POM) (mobile sources, open burning, combustion, incineration)

- The greatest risks from non-inhalation pathways occur when air toxics deposit from the air, persist in the environment, and contaminate food we eat. These include:
  - Dioxins (backyard burning, incineration, electric utilities)
  - Mercury (coal combustion, Portland cement, incineration, mining)

* *Source: National Air Toxics Assessment (NATA).*

Other Air Toxics Concerns...

- Cumulative effects
- Synergistic effects
- New chemicals
- Chemicals that have not been assessed
- Sensitive subpopulations (e.g., children, elderly)

Current "Regulatory" Tools to Reduce Air Toxics

- Tools for stationary sources (contribute 16% to exposure)*
  - MACT
  - Residual risk and technology reviews
  - Urban Air Toxics Strategy
  - Permits (Title V and PSD/NSR)

- Other programs:
  - State implementation plans
  - Community-focused grant programs (e.g., CARE)

Draft 2005 NATA predicts the average cancer risk to an individual in the U.S. is 50 in a million. Background emissions contribute 21%, secondary transformation contributes 42%, and mobile sources contribute 21% to exposure.

Other Tools that Improve Public Awareness of Air Toxics

- Emissions Monitoring
  - Greater use of established remote measurement approaches (e.g., optical fence line monitoring, DIAL)
  - Continuation of emerging remote measurement technology development
- Public Transparency
  - Emission inventories (e.g., National Emissions Inventory, Toxics Release Inventory)
  - Rule requirements for electronic submission of compliance data
- Neighborhood Monitoring
  - Community-scale Air Toxics Monitoring Grant Program
- Implementation
  - Improve community capacity and awareness through conferences, training, websites, webinars, newsletters, etc.
- Enforcement
  - Use monitoring to identify at-risk communities and specific emissions sources
  - Obtain injunctive relief where violations are found

… and we have a strategy to use the tools.

- **Target** priority categories of emission sources
- **Utilize** a more cost-effective "sector-based" approach to rulemaking
- **Reduce** air toxics through voluntary programs
- **Improve** data collection and provide better information to the public through monitoring and national assessments
- **Provide** tools to help communities and other stakeholder participate in rulemaking.
- **Coordinate** compliance and enforcement efforts towards priority sectors and areas of concern

Reduce pollution in communities

Target: Stationary Sources Priority Sectors

- Petroleum refining
- Iron & Steel
- Chemical Manufacturing
- Utilities
- Non-utility Boilers
- Oil & Gas
- Portland Cement

Emissions from all of these sectors disproportionately affect minority communities

Target: Mobile Source Sector

- Mobile sources contribute 21% to exposure*

- Mobile source toxics strategy
  - Tighter standards for new light-duty vehicles and fuels (Tier 3)
  - Implementation of recent standards (including vehicle air toxics standards (MSAT)) for all mobile source sectors
  - Diesel retrofit and reduced idling, including targeted EJ actions and ports/goods movement efforts;
  - Near-roadway information and planning tools for communities; and
  - Lead from aviation gasoline.

Draft 2005 NATA predicts the average cancer risk to an individual in the U.S. is 50 in a million. Background emissions contribute 21%, major sources contribute 16% and secondary transformation contributes 42% to exposure.

Utilize: Multi-pollutant Rulemaking

- **Common sense coordination**
  - OAR will take advantage of the natural overlap of certain air toxics and criteria pollutant rules and coordinate the development and implementation of MACT and NSPS where it makes sense.
  - Many air toxics are also particles or volatile organic compounds (VOC).
- **Coordinating MACT development for specific source categories with other rules can:**
  - reduce rulemaking costs;
  - provide more certainty and lower costs for industry;
  - simplify implementation for states, local, and tribal agencies; and
  - enhance cost-effective approaches.

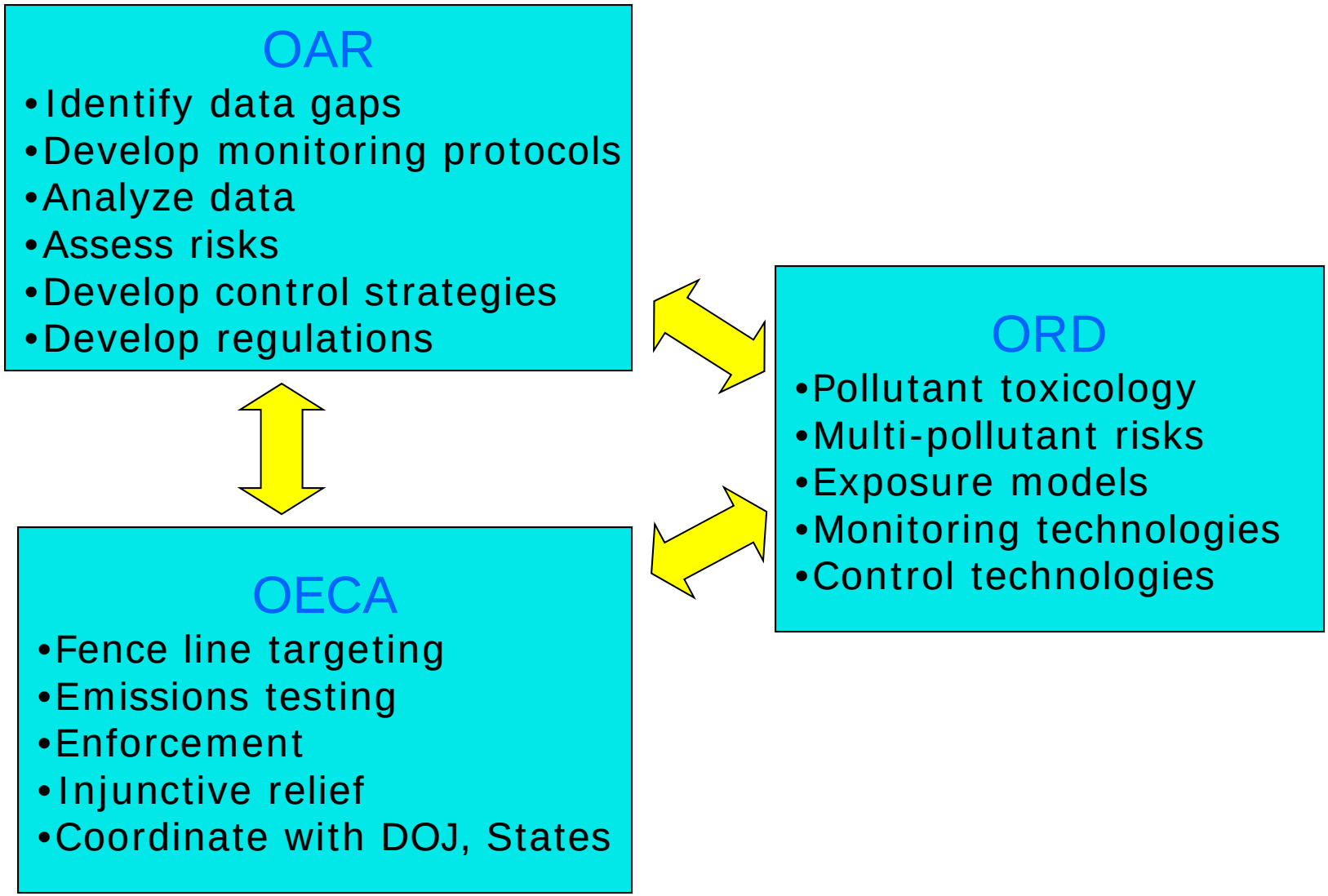
Examples

Utilities
Utility Strategy will allow a coordinated approach to MACT, NSPS and the Clean Air Transport Rule

Cement
Coordinating development of the MACT and NSPS. Reducing toxic HCl emissions results in huge reductions in SO2, which will satisfy NSPS.

Refineries & Chemical Plants
OAR is pursuing a coordinated approach with OECA to reduce multi-pollutant emissions from flares & leaks

Coordinate: OAR, ORD and OECA work together to address Air Toxic Emissions affecting communities



Reduce, Improve, Provide: Other Actions that Focus on Communities

- Revive Community-Scale Air Toxics Grant Program
- Release 2005 National-Scale Air Toxics Assessment and integrate criteria pollutant date in 2011
- NO2 Monitoring program to evaluate health impacts on communities near roadways
- Improve air toxics emission inventories
- Target Community Action for a Renewed Environment (CARE) grants to address toxics in overburdened communities
- National Clean Diesel Campaign and voluntary programs to reduce diesel emissions
- Tools for Schools (indoor air)

With all that…What is the future of Air Toxics?

- What are your concerns?
- Where should we focus our limited resources?
- What efforts have been most effective?
- Future discussion on air toxics:
  - Brainstorming session today
  - Breakout to discuss major issues tomorrow
  - Report out on Thursday
  - Later response with actions and timelines we can address

“Think left and think right and think low and think high. Oh, the thinks you can think up if only you try! “

Dr. Seuss