EPA Enforcement and Next Generation Compliance

George Washington University Law School Conference: Advanced Monitoring, Remote Sensing, and Data Gathering, Analysis and Disclosure in Compliance and Enforcement

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March 27, 2015

Tonawanda Coke Citizen Science Video

http://www.youtube.com/watch?v=DZKxn1nioNA

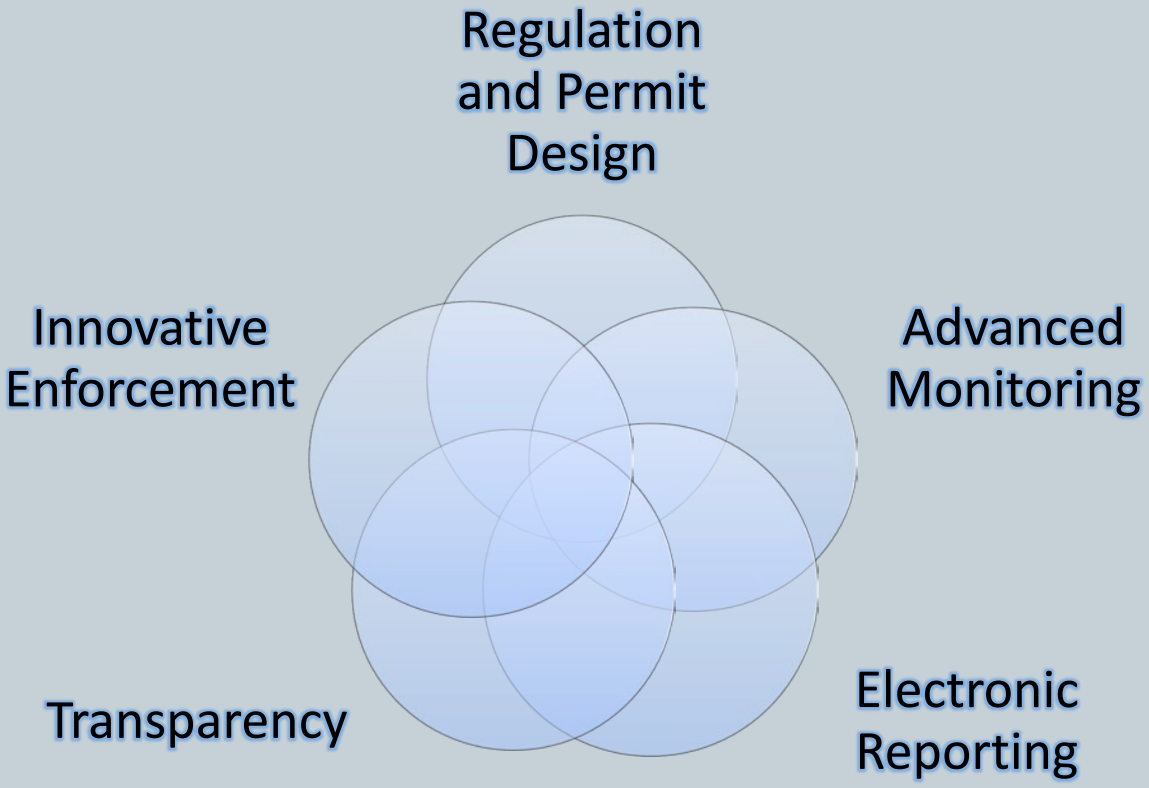
EPA Enforcement Goals

- **Tough civil and criminal enforcement** for violations that threaten communities and the environment
- **Next Generation Compliance** – reduce pollution, increase compliance
- **Strong EPA/state/tribal environmental protection**

Enforcement Challenges

- Widespread noncompliance among largest sources
  - Major air sources like power plants and refineries
  - Water pollution discharges
  - Mineral processing
- New environmental challenges – dispersed sources
- Budgets declining

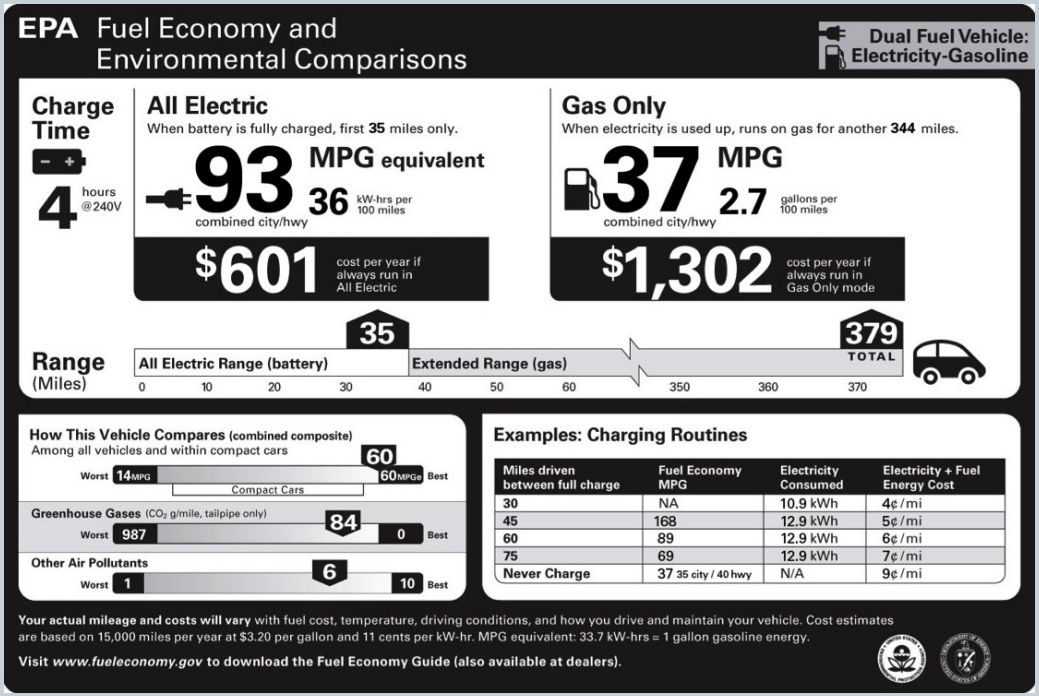
Next Generation Compliance



1. More Effective Rules and Permits

Rules and permits structured to promote compliance

- Simplicity
- Designed to make compliance the default
- Market mechanisms – efficiency and clarity
- Transparency as accountability tool
- Self and third-party certifications

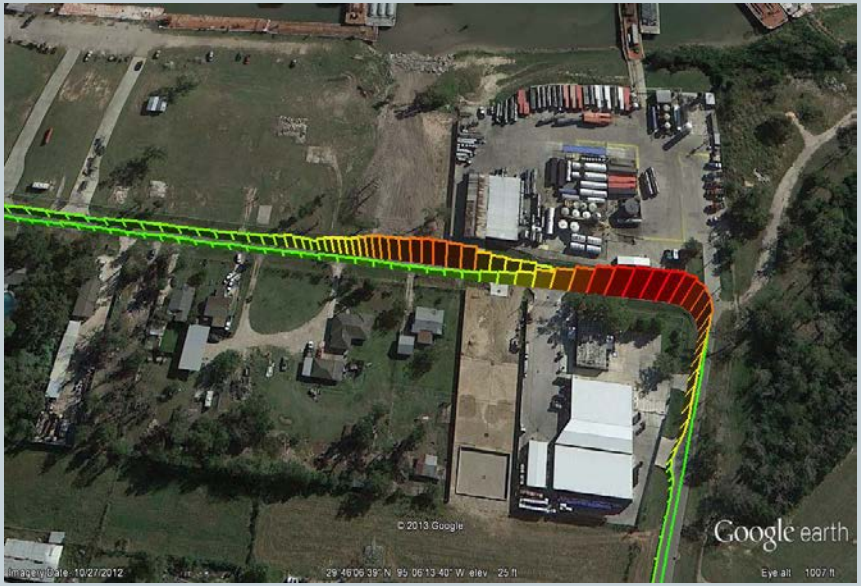


Proposed Air Rule for Petroleum Refineries

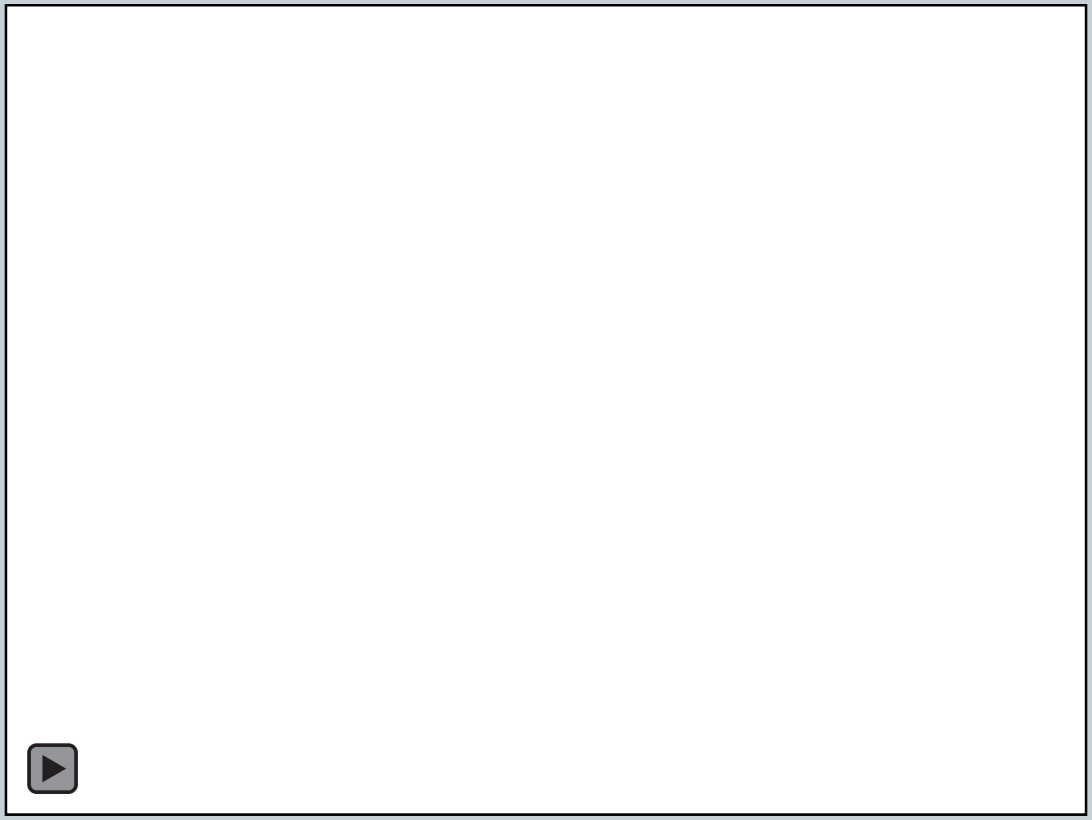
- Require fenceline monitoring at the point where community is impacted
- Public posting provides incentive to keep emissions well below the standard to avoid exceedances

2. Advanced Monitoring

- Real-time monitoring – knowing about pollution as it's happening
- Facility feedback loops – preventing pollution before it happens
- Fenceline monitoring
- Community monitoring
- Remote sensing

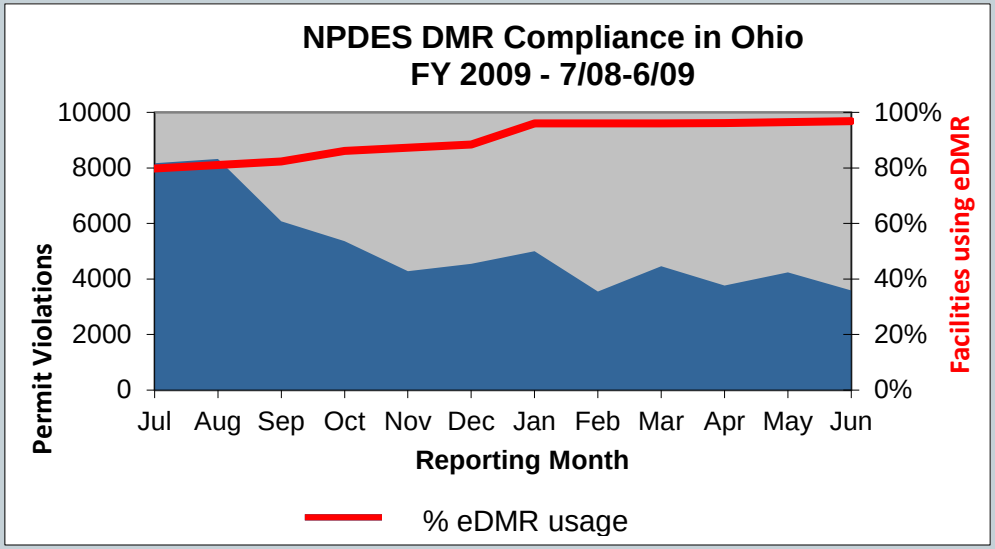


Infrared Footage of Hazardous Organic NESHAP Storage



3. Electronic Reporting

- Information technologies make new solutions possible
- Smart tools and 2-way communication
- Private sector reporting tools
- NPDES e-reporting rule proposed last year
- Agency policy: electronic reporting the default



Electronic Hazardous Waste Manifest System (e-Manifest)

- Estimated benefits
  - Reduce burden by approximately 300,000 - 700,000 hours
  - Annual savings of approximately $75 million

4. Increased Transparency

- Evidence that effective transparency drives performance
- SDWA Consumer Confidence Reports
- Restaurant health inspection grades

Mailed report on compliance resulted in:

Total violations: down 30-44%

Health violations: down 40-57%

*Bennear & Olmstead, Journal of Environmental Economics and Management (2008).

BP Whiting's Public Website of Fenceline Monitoring Results

AECOM

BP Refinery Whiting, Indiana

AIR QUALITY MONITORING PROGRAM

Home
Using the Web Site

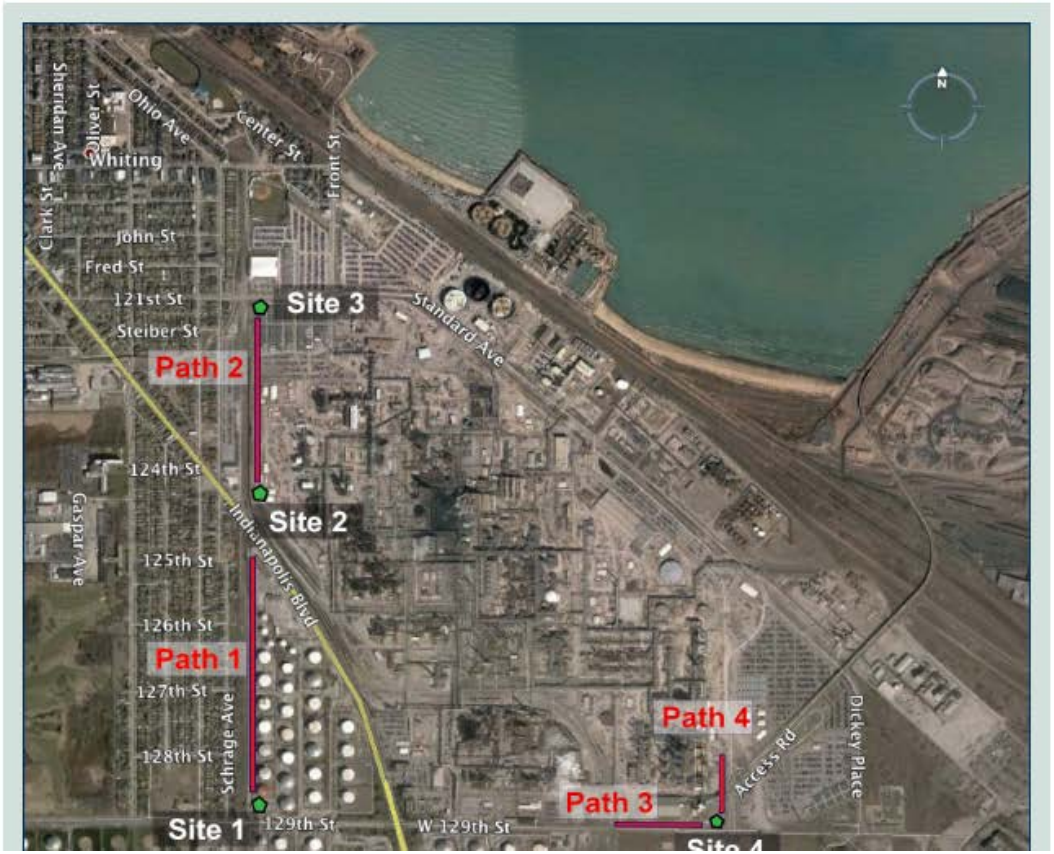
Measurement Data
Fixed Station Measurement Data
Open Path Measurement Data
Wind Rose

Information
Site Locations
Monitoring Equipment
Chemical Information
Glossary

Other
Documents
Contacts

The air monitoring network is shown in the map below. There are four air quality and meteorological monitoring stations shown in white lettering. These stations (which are referred to as "fixed staions") monitor the air for sulfur dioxide, hydrogen sulfide, total reduced sulfur (TRS) compounds, benzene, toluene, pentane, and hexane along with local weather conditions. In addition, adjacent to the fixed stations are four "open path" monitors. Open path monitors send ultra-violet light beams along a path. Chemical compounds are measured over the distance the path covers. The open path monitors are shown in red on the map. The open path monitors measure benzene, toluene, xylenes, carbon disulfide, carbonyl sulfide, and ozone.

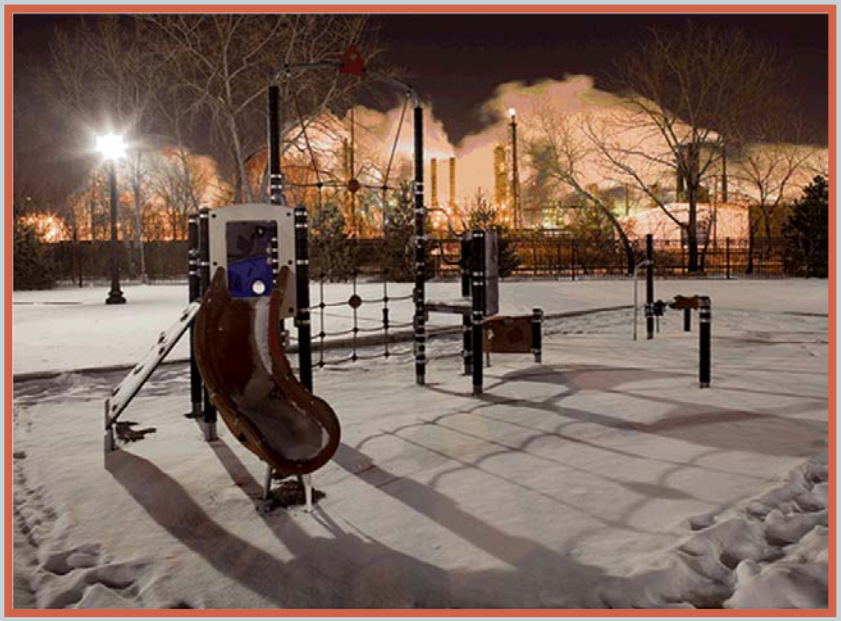
Click here for larger image.



5. Innovative Enforcement

Include Next Gen ideas in settlements

- Advanced monitoring
- Electronic reporting under consent decree
- Public posting of compliance and pollution data
- Independent third party verification



RCRA Settlement with Total Petroleum Puerto Rico

- Fully automated release detection monitoring at 125 facilities
- Transmit monitoring data to central location

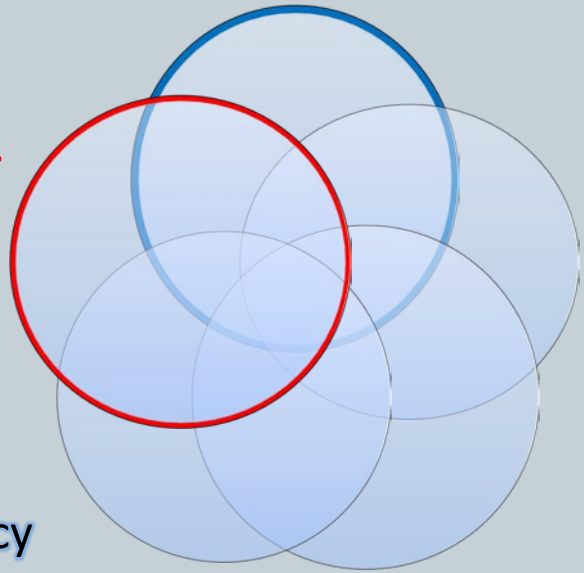
Upcoming EPA Panelists

David Hindin

Regulation and Permit Design

John Dombrowski

Innovative Enforcement – Data Analytics



Advanced Monitoring

Transparency

Electronic Reporting