EPA’s Office of Enforcement Compliance Assurance Priorities
Purpose

- To explore the relationship between enforcement and permitting priorities and how they may complement and/or conflict with each other

- Discuss state and local priorities and how they are consistent or inconsistent with federal priorities
EPA Enforcement Priority Process

- EPA selects a limited number of specific environmental problems as national strategic enforcement and compliance assurance priorities
  - Occurs every 3 years
  - FY ‘08-’10 cycle
  - Public input sought and obtained
Process

- Priority selection based on three criteria:
  - a history of noncompliance with environmental laws
  - the potential for significant environmental or human health benefits
  - an appropriate Federal role
National Priorities

- CAA Air Toxics
- CAA NSR
- RCRA Financial Responsibility
- RCRA Mineral Processing
- CWA Combined Sewer Overflows
- CWA Sanitary Sewer Overflows
- CWA Storm Water
- CWA Combined Animal Feeding Operations
- Indian Country (drinking water, schools, dumps)
Air Toxics Priority

- National air toxics process areas:
  - Leak detection and repair (LDAR)
  - Flares
  - Surface coating
Leak Detection and Repair (LDAR)

- Leaking equipment -- largest source of hazardous air pollutant emissions in the petroleum refinery and chemical manufacturing sectors

- Widespread noncompliance and the potential for significant emission reductions
  - EPA’s LDAR compliance evaluations revealed higher leak rates than industry’s
  - EPA -- 5% leak rate
  - Industry -- 1% leak rate
Flares

- Parts 60 and 63 (“General Provisions”)
  - Flares that are control devices required to combust gases with heat content of 300 Btu or greater; and
  - Meet flare design specifications

- Flares -- Two major problems:
  - Combustion of gases with low Btu content, and/or
  - Over-steaming

- Causing --
  - Incomplete combustion
  - Significant HAP emissions
Surface Coating

- 16 surface coating MACT standards
- Many facilities in urban areas and non-attainment areas for ozone
- Widespread non-compliance
  - Not operating controls within parameters established during performance test
NSR Priority

- National NSR areas:
  - acid manufacturing
  - cement
  - coal-fired utilities
  - glass
NSR Priority- Overall Goal

- 85% of capacity referred, filed, consent decree, or no further action required at this time
NSR Priority 2008-2010 Planning Cycle

- 70% of each sector universe (capacity/facilities) under active negotiations or investigations ("investigation")

- 30% of each sector universe to be referred, filed, under a consent decree, or determined that no further action is needed at this time ("addressed")
Petroleum Refineries

In 2007, the National Petroleum Refinery Priority reverted to the “core” program

- We continue to:
  - Pursue violations for the remainder of the Refinery universe not already addressed (approx 11%)
  - Examine consent decree compliance
  - Identify and pursue any new issues that arise (e.g., refinery expansion, flares, and ambient benzene impacts)
Petroleum Refineries – Results to Date

- 24 settlements
- Approximately 88% of the nation’s refining capacity
- 99 refineries
- 29 states
- Emission reductions
  - 87,000 tons NOx
  - 250,000 SO2
- FY ’08 – Four additional settlements
  - Premcor, Sinclair, Hunt and Holly
- FY ’09 – Two additional settlements
  - Frontier Oil and Wyoming Refining
Coal-Fired Utilities
Coal-Fired Utilities 114s

- In the last two years EPA has issued approximately two dozen information requests to utilities
Coal-Fired Utilities Litigation

- Alabama Power Company
- Cinergy (now Duke Energy Indiana and Duke Energy Ohio)
- Duke Energy Corporation
- Louisiana Generating – Big Cajun 2 (January 2009)
- Westar (January 2009)
16 Settlements

- >1.9 million tpy of reductions (upon full implementation)
- >$11 billion – injunctive relief
- >$62 million – civil penalties
- >$175 million – environmental mitigation projects
Coal-Fired Utilities Settlements

- Kentucky Utilities
- Salt River Project
- American Electric Power
- East Kentucky Power Cooperative
- Nevada Power Company
- Alabama Power
- Minnkota Power Cooperative and Square Butte Power Cooperative
- First Energy (Ohio Edison Company, W.H. Sammis Power Station)
Coal-Fired Utilities Settlements (continued)

- Illinois Power Company and Dynegy Midwest Generation
- South Carolina Public Service Authority (Santee Cooper)
- Southern Indiana Gas and Electric Company Culley Station
- Wisconsin Electric Power Company
- Virginia Electric Power Company
- Alcoa, Inc. (Rockdale, TX facility)
- PSEG Fossil
- Tampa Electric Company
Kentucky Utilities

- Lodged February 3, 2009
- E.W. Brown Unit 3 Generating Station
- Injunctive relief -- $144 million
  - SCR (first to meet .070 lb/mmBTU)
  - Flue gas desulfurization unit (.100 lb/mmBTU or 97%)
- 30,000 tpy of emission reductions
- $1.4 million (largest for single unit), $3.0 million in mitigation (carbon capture and storage, clean school buses, and National Park Service)
American Electric Power (AEP)

- “Courthouse Steps” Settlement
- 80,000 hours of U.S. time invested
- Covers AEP’s Eastern system (46 units/21,475 MW)
- >$4.6 billion in injunctive relief (11-14 new scrubbers, 2 new SCRs)
- $15 million civil penalty
- $60 million for mitigation projects
AEP: Our Settlement Partners

States
- New York
- New Jersey
- Maryland
- Rhode Island
- Massachusetts
- Connecticut
- New Hampshire
- Vermont

Environmental Groups
- Natural Resources Defense Council, Inc.
- National Wildlife Federation
- Ohio Citizens Action
- Hoosier Environmental Council
- West Virginia Environmental Council
- Izaak Walton League of America
- League of Ohio Sportsmen
- Sierra Club
- United States Public Interest Research Group
- Citizens Action Coalition of Indiana
- Ohio Valley Environmental Coalition
- Clean Air Council
- Indiana Wildlife Federation
AEP Settlement
77% Pollution Reduction

2006

827,911 tons SO₂
231,437 tons NOₓ
1,059,348 tons

2019

174,000 tons SO₂
72,000 tons NOₓ
246,000 tons
AEP Settlement

\[ \text{SO}_2 \text{ Reduction} \quad \text{vs} \quad \text{SO}_2 \text{ Output} \]

AEP Settlement

654,000 tons of \text{SO}_2 \text{ Removed} > 570,607 \text{ tons of \text{SO}_2} 

from all pollution sources CT, NJ, NY
Mitigation Projects:

- $36 million for:
  - Barge ULSD and retrofits
  - Diesel Truck retrofits
  - Purchase for preservation ecologically sensitive lands ($15 million)
  - National Parks projects

- $24 million for 8 states for identified categories of projects (renewables, diesel, efficiency, etc.)
Cinergy’s Wabash Plant (Terre Haute, Indiana)
Cinergy’s Beckjord Plant (New Richmond, OH)
United States v. Cinergy

- Jury trial on issues of liability
- Favorable United States verdict on 4 of 14 alleged “major modifications”
  - Wabash Units 2, 3 and 5
- Jury rejected Cinergy’s “routine maintenance, repair and replacement defense” (RMRR)
- Jury found that “reasonable power plant operator” would not have expected a net emissions increase
United States v. Cinergy

- **Special Verdict:**
  - “Did Defendants prove by a preponderance of the evidence that the project qualified as a RMRR activity? __ YES __NO”
  - “... [D]id Plaintiffs prove by a preponderance of the evidence that a reasonable power plant owner or operator would have expected a net increase in [sulfur dioxide/nitrogen oxides] emissions of 40 tons or more per year as a result of the project? __ YES __NO”
United States vs. Cinergy

- October 14th favorable remedy decision which stated that the Court had:
  - “the authority to take appropriate actions that remedy, mitigate and offset harms to the public and the environment caused by the Defendants’ proven violations of the CAA.”
United States vs. Cinergy

- Remedy Trial had been scheduled for February 2, 2009 for Wabash
- On December 22, 2008 Judge ordered a new trial stating that Cinergy’s witness had “perverted the truth” when he represented himself as a retiree rather than a paid consultant
- Remedy Trial for successful Wabash claims held in March 2009
- New liability trial for remaining claims held May 11, 2009
- Jury decision for EPA on 2 of 6 claims on liability on May 20, 2009
United States vs. Cinergy

- Video Wabash River Impact
Acid Sector

- **Sulfuric Acid:**
  - Largest volume chemical produced in the US
  - Used to make fertilizer, gasoline, soaps, pigments and dyes
  - Produced both voluntarily and as a byproduct from metal smelters

- **Nitric Acid:**
  - Tenth largest volume chemical produced in US
  - Used to make fertilizer, explosives, and nitro-organic chemicals

- **Environmental Stakes:**
  - 120,000 tpy of SO₂
  - 20,000 tpy of NOₓ

- **Widespread Non-compliance:**
  - NSPS—Many plants built after 1971 NSPS standards
  - NSR—Expansion “modifications” without permitting
Acid Sector Enforcement

- **Information Requests (>40)**
  We have issued over 40 Information Requests to 35 of the 117 acid plants in the U.S.

- **Notices of Violation (13)**
  - Agrifos, Pasadena, TX
  - Big River Zinc, Sauget, IL (NSPS)
  - Chemtrade, Cairo, OH
  - DuPont, James River, VA
  - DuPont, North Bend, OH
  - Dyno Nobel, Donora, PA
  - Lucite, Belle, WV
  - Marsulex, Toledo, OH
  - PCS Nitrogen, Geismar, LA
  - PVS Chemical, Chicago, IL (NSPS)
  - Royster-Clark, North Bend, OH
  - J.R. Simplot, Pocatello, ID
  - PCS Nitrogen, Geismar, LA
Acid Sector - Results to Date

Case Results:
- Five Settlements covering 22 Acid Plants:
  - **Agrium/Royster Clark**: single facility nitric acid settlement (February 2007)
  - **Rhodia Inc.**: eight plant global sulfuric acid settlement (April 2007)
  - **DuPont**: four plant global sulfuric acid settlement (July 2007)
  - **Chemtrade/Marsulex**: eight plant global sulfuric acid settlement (January 2009)
  - **DuPont/Lucite**: single facility sulfuric acid settlement (April 2009)

Where: Nationwide – Settled Plants are located in 9 states:
- California, Indiana, Kentucky, Louisiana, Ohio, Oklahoma, Texas, Virginia, and Wyoming

Emissions reductions:
- Sulfur Dioxide (SO2) by more than 36,740 tons per year
- NOx, acid mist, VOC, CO and PM by more than 610 tons per year

Injunctive Relief: “Set-the-Bar” on BACT rates
- Sulfuric acid: 1.5-2.5 lb/ton (from 3.5 lb/ton)
- Nitric acid: 0.6 lb/ton (down from 3.0 lb/ton)
- $224 million in control technologies

Civil Penalties:
- $9.575 million

Supplemental Environmental Projects:
- $48,000
Lucite/DuPont Belle, WV 4/20/09

- One sulfuric acid plant in Belle, West Virginia owned by Lucite and operated by DuPont
- Company elected to shut down facility
- 1469 TPY of emission reductions
- $2 million penalty (shared)
- State of West Virginia
Glass Manufacturing Sector
Glass Sector

- Environmental Stakes:
  - 66,000 tpy of NOx
  - 18,480 tpy of SO$_2$
  - 6,270 tpy of PM$_{10}$
- Widespread non-compliance:
  - Aged Plants
  - Modifications
  - Few NSR Permits
  - Rebricking (costs not part of NSPS “reconstruction” but not exempt from NSPS “modification”)

Glass Sector

- Information Requests
  - We have issued approximately 72 Information Requests to 58 of the 132 glass plants in the U.S.

- Notices of Violation (7)
  - Durand Glass, Millville, NJ (2007)
  - Owens Brockway, Clarion, PA (2008)
  - Owens Brockway, Crenshaw, PA (2008)
  - Owens Brockway, Waco, TX (2009)
  - Owens Brockway, Muskogee, OK (2009)
  - AFG Industries, Church Hill, TN (2008)
  - Saint Gobain, Madera, CA (2003)

- Federal Complaints (1)
  - Saint Gobain, Madera, CA (2005)
Glass Sector - Results to Date

Case Results:
- One settlement covering 1 plant:
  - Saint Gobain; single facility glass settlement (April 2005)

Where: Madera California:

Emissions reductions:
- Nitrogen Oxides (NOx) reduced by 226 tons per year
- Sulfur Dioxide (SO2) reduced by 167 tons per year
- Particulate Matter (PM) reduced by 33 tons per year

Injunctive Relief: “Set-the-Bar” on BACT rates
- Replaced existing Furnace #2 with Oxyfuel Furnace to reduce NOx (1.3 lbs NOx/ton of glass pulled)
- Installed Scrubber with 85% removal efficiency
- Installed ESP (0.45 lbs PM/ton of glass pulled)
- $6.6 million in control technologies

Civil Penalties:
- $929,000

Supplemental Environmental Projects:
- $1.2 million
Cement Manufacturing Sector
Cement Sector

- Environmental Stakes:
  - 90,000 TPY of SO₂
  - 90,000 TPY of NOx
- Wide-spread non-compliance:
  - Large capacity increases
  - Little to no real time continuous monitoring
  - Few modern SOx or NOx controls
  - Few NSR Permits
  - Fuel changes (tires and pet coke)
Cement Sector

- **Information Requests (>60)**
  - We have issued over 60 Information Requests to 55 of the 110 cement plants in the U.S.

- **Notices of Violation (9)**
  - California Portland Cement, Rillito, AZ
  - Cemex, Victorville, CA
  - Cemex, Lyons, CO
  - Cemex, Fairborn, OH
  - Cemex, Ponce, PR
  - Essroc, Bessemer, PA
  - Holcim, Hagerstown, MD
  - St. Mary’s Cement, Dixon, IL
  - California Portland Cement, Mojave, CA

- **Federal Complaints (2)**
  - Cemex, Victorville, CA (2007)
  - Cemex, Lyons, CO (2009)
Cement Sector - Results to Date

Case Results:
- 2 Settlements covering 2 Cement Plants:
  - St Mary’s Cement (Sept 08)
  - CEMEX Victorville California (Jan 09)

Where: Settled Plants are located in 2 states:
- Illinois and California

Emissions reductions:
- NOx reduced by more than 4,590 tons per year

Injunctive Relief:
- St Marys: SNCR operating at 75% reduction at 4 kilns, $1.9 million in injunctive relief
- CEMEX: NOx limit of 1.95 lb/ton – the lowest current limit in the U.S., CEMEX chose SNCR to meet these limits

Civil Penalties:
- $2.8 million

Supplemental Environmental Projects:
- None
### Other PSD/NSR Activity

- Polystyrene Foam
- Landfills
- Industrial Boilers
- Iron and Steel
- Natural Gas Transmission
- Elevated Flares
- Aluminum

- Municipal Waste Combustors
- Carbon Black Production
- PVC Manufacturers
- Oil and Gas producers
- Ethanol producers
- Wood Products
- Pulp and Paper
Fiscal Year ’08 Air Numbers

- Injunctive Relief: ~$5.0 billion
- Pounds Reduced: ~1.7 billion pounds
- Health Benefits: ~$35 billion annually (EPA’s 10 largest CAA cases – upon full implementation)
- Civil Penalties: ~$15 million
- Supplemental Environmental Project: ~$15 million
- Mitigation Projects: $70 million
FY2008 Enforcement & Compliance Annual Results
Top Air Enforcement Cases Yield Environmental and Human Health Benefits

Pollutant Reductions
EPA’s 10 largest enforcement actions for stationary source Clean Air Act violations obtained commitments by companies to reduce their emissions of sulfur oxides (SOx), nitrogen oxides (NOx) and particulate matter (PM).
When all required pollution controls from the 10 enforcement actions are completed, emissions will be reduced by approximately 1.7 billion pounds per year.

Health Benefits
The annual human health benefits from these reductions in SOx, NOx, and PM are estimated to have a value of $35 billion. These health benefits include:
▪ approximately 4,000 avoided premature deaths in people with heart or lung disease;
▪ over 2,000 fewer emergency room visits for such diseases as asthma and respiratory failure;
▪ about 6,000 fewer cases of chronic bronchitis and acute bronchitis;
▪ about 4,000 fewer nonfatal heart attacks;
▪ over 30,000 fewer cases of upper aggravated asthma;
▪ over 50,000 fewer cases of upper and lower respiratory symptoms; and
▪ over 200,000 fewer days when people would miss work or school.

Data Source of Pollutant Reduction: Integrated Compliance Information System (ICIS), October 11, 2008. Benefit Estimate: The health benefit estimates are based on a methodology developed to calculate the co-benefits of reducing particulate matter for the Ozone NAAQS Regulatory Impact Analysis (RIA). The FY08 health incidence estimates are based on a more recent epidemiological study (Laden at al. 2006) than was used in FY2006 and FY2007 (Pope et al. 2002).
Recent Accomplishments – FY 2008
Results for Enforcement

- EPA concluded civil and criminal enforcement actions requiring polluters to invest an estimated $11.8 billion to reduce pollution, clean up contaminated land and water, achieve compliance and implement environmentally beneficial projects.
- This investment is the largest amount ever achieved by EPA.
Recent Accomplishments – FY 2008
Results for Enforcement

- Civil and criminal defendants have committed to reduce pollution by approximately 3.9 billion pounds when these activities are completed.
- This is approximately equal to the amount of pollution reduced over the previous four years combined.