



# Clean Air Act Enforcement Update NACAA Fall Membership Meeting

Pamela Mazakas  
Acting Director

Air Enforcement Division  
September 23, 2009





# National Priorities

- CAA Air Toxics
- CAA New Source Review
- 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 priority areas include:

- Leak detection and repair (LDAR)
- Flares
- Surface coating
- Air toxics around schools
  - All regions are required to participate in this new FY 2010 Air Toxics Priority





# 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



# 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
- Some regions are disinvesting from the surface coating priority because they have not found widespread noncompliance



# Air Toxics Around Schools

- The Air Toxics Strategy goal for the Air Toxics Around Schools Initiative is for regions to “address” facilities associated with the Agency’s current list of schools
- “Address” for Air Toxics Around Schools is defined as:
  - Determining through a compliance evaluation (i.e., PCE, FCE, or investigation) that no further action is needed at this time;
  - Issuing an administrative order or administrative penalty order;
  - Referring a case to DOJ.



# New Source Review (NSR) Priority

- National NSR areas:
  - coal-fired utilities
  - acid manufacturing
  - cement manufacturing
  - Glass manufacturing





# NSR Priority- Overall Goal

- 85% of capacity referred, filed, consent decree, or no further action required at this time.



# 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)





# Coal-Fired Utilities Results

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



# Kentucky Utilities

- Lodged February 3, 2009
- E.W. Brown Unit 3 Generating Station
- Injunctive relief -- \$144 million
- 30,000 tpy of emission reductions
- \$1.4 million penalty (largest for single unit)
- \$3.0 million in mitigation (carbon capture and storage, clean school buses, and National Park Service)

# Acid Manufacturing Sector





# 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 SO<sub>2</sub>
  - 20,000 tpy of NO<sub>x</sub>
- 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)



# 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 (SO<sub>2</sub>) by more than 36,740 tons per year
- NO<sub>x</sub>, 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 NO<sub>x</sub>
  - 18,480 tpy of SO<sub>2</sub>
  - 6,270 tpy of PM<sub>10</sub>
- 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 73 Information Requests to 59 of the 134 glass plants in the U.S.
- Notices of Violation (7)
- 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 (SO<sub>2</sub>) 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 SO<sub>2</sub>
  - 90,000 TPY of NO<sub>x</sub>
- Wide-spread non-compliance:
  - Large capacity increases
  - Little to no real time continuous monitoring
  - Few modern SO<sub>x</sub> or NO<sub>x</sub> controls
  - Few NSR Permits
  - Fuel changes (tires and pet coke)



# Cement Sector

- Information Requests (>80)
  - We have issued over 80 Information Requests to 60 of the 105 cement plants in the U.S.
- Notices of Violation (12)
- 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

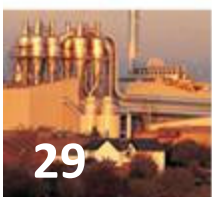


# Petroleum Refineries

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, cokers, 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



# Other PSD/NSR Activity

- Polystyrene Foam
- Landfills
- Industrial Boilers
- Iron and Steel
- Natural Gas Transmission
- Elevated Flares
- Aluminum
- Municipal Waste Combustors
- Carbon Black/Calcined Coke
- 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