



**U.S. Environmental Protection Agency – November 2004**  
**Compliance and Enforcement National Priority:**  
**Petroleum Refining**

The United States Environmental Protection Agency (EPA) Office of Enforcement and Compliance Assurance (OECA) has established national priorities for federal fiscal years (FY) 2005 through 2007. OECA and the EPA's 10 Regions will make the following issues priorities for monitoring, compliance assistance, enforcement and cleanup actions over the next three years:

1. Clean Air Act: Air Toxics
2. Clean Air Act: Prevention of Significant Deterioration and New Source Review
3. Tribal
4. Clean Water Act: Wet Weather, including:
  - Concentrated Animal Feeding Operations
  - Combined Sewer Overflows
  - Sanitary Sewer Overflows
  - Storm Water
5. Resource Conservation and Recovery Act: Mineral Processing and Mining

After evaluating the Safe Drinking Water Act (SDWA) Microbial Rules as a national priority, the Agency determined that it was more appropriate to address the microbial non-compliance problems, which occur predominately at very small drinking water systems, through the SDWA core program. The Petroleum Refining national priority is near completion and will be assessed during the coming year to determine if sufficient progress has been made to return this priority to the core program.

The Petroleum Refining strategy summary that follows defines the goals and implementation process that will end the priority treatment of this sector.

### **Background**

Petroleum refining is a mature priority for the air program, having been the focus of national attention since 1995. Refineries were designated a national priority in FY 1996. Beginning in FY 1998, a workgroup was formed involving several agencies and regions to develop a strategy to address the widespread environmental violations that had been detected across the industry. In FY 2005, the EPA will review the results of petroleum refining work to determine whether sufficient progress has been made to return this area to the core program.

At the onset of the strategy, there were 162 domestic refineries located across the country, nearly half of them within three miles of population centers with more than 25,000 people. Ranked against 17 other sectors with air emissions, annual emissions from the petroleum refining sector were first for volatile organic compounds (VOCs), first for sulfur dioxide (SO<sub>2</sub>), second for nitrogen oxide (NO<sub>x</sub>), fourth for carbon monoxide (CO) and eighth for particulate matter (PM<sub>10</sub>).

Based on 1994 Toxic Release Inventory (TRI) data, average toxic emissions for these facilities annually were 422,904 pounds.

Throughout the 1990s, regions focused enforcement investigative activity on refineries, which showed the highest ratio of violations to investigative activity of 29 sectors evaluated. Violations were identified at nearly all refineries inspected. The majority of the violations were air-related; Resource Conservation and Recovery Act (RCRA) and Clean Water Act (CWA) issues were less significant. The fact that 75 percent of petroleum refining emissions are to the air and the high rate of violation made the air issues a national priority.

Since 1980, individual refineries have expanded capacity significantly, so that even though the number of refineries has declined, production capacity has increased. As individual refineries got larger, it was expected that emissions would increase as well. This was not reflected in state permitting activity, and much of the non-compliance with regulatory requirements identified in the industry relates to the expansions.

### **Environmental Problems**

In the late 1990s, an integrated strategy was developed for the sector focused on four of the most significant areas of non-compliance:

1. New Source Performance Standards
2. Leak Detection and Repair
3. Benzene
4. New Source Review/Prevention of Serious Deterioration

EPA engaged refining companies on suspected non-compliance at the corporate level rather than developing claims at each facility to support a judicial case. The goal was to address settlement discussions to all of a refiner's facilities based on claims developed at only a few. The resulting agreements are referred to as "global" settlements. EPA is able to efficiently and quickly address environmental problems that otherwise would have taken substantially longer to rectify.

To date, 48 refineries (more than 40 percent of the domestic refining capacity) are subject to judicial settlements that will result in compliance. Ongoing negotiations involve 10 other refiners, representing an additional 40 percent of domestic refining capacity.

### **Goals**

**Goal 1:** Through settlement or filed civil action, address 80 percent of the domestic refining capacity and 90 percent of the domestic refining capacity in environmental justice areas.

**Goal 2:** From the 1995 baseline, 50 percent improvement in compliance.

**Goal 3:** Reduce SO<sub>2</sub> and NO<sub>x</sub> emissions by 20 percent.

**Goal 4:** Respond to all consent decree deliverables requiring a response, 75 percent of those

responses within 90 days of receiving the deliverable.

### **Strategy**

1. Continue to use various enforcement tools, as described in planning documents for prior fiscal years, to continue and complete implementing the strategy.
2. Negotiations will attempt to bring about a consensual resolution with refining companies.
3. Where a consensual resolution seems unlikely during FY 2005, the case will proceed to a litigation track, with the objective of a filed civil judicial action.
4. In order to ensure 100% of consent decree deliverables are responded to (i.e., Goal 4) a thorough review of the current consent decree tracking process will be conducted, and where necessary, new or modified processes will be developed.

### **Performance Measurement**

Petroleum refining activities will be assessed at the end of FY 2005 to determine whether progress towards strategy goals is sufficient to return the area to EPA's core program. When this sector returns to the core program, regions and states will be responsible for resolving residual non-compliance in this sector, carrying out future baseline compliance monitoring, and preserving selected environmental benefits obtained through settlements and litigation. Regions and states will continue to report required data on their activities in this sector, which will enable periodic monitoring appropriate headquarters and regional management.