



U.S. Environmental Protection Agency - October 2007 FY08 – FY10 Compliance and Enforcement National Priority: Clean Air Act, Air Toxics

What is the Environmental Problem?

For the FY 2008-2010 planning cycle, the Air Toxics National Compliance and Enforcement Strategy will focus on the problem areas of leak detection and repair (LDAR), industrial flares, and surface coating. To address these problem areas, EPA will utilize a combination of compliance assistance, compliance evaluations and enforcement.

LDAR

Leaking equipment, such as valves, pumps, and connectors, are the largest source of emissions of volatile organic compounds (VOCs) and volatile hazardous air pollutants (VHAPs) from petroleum refineries and chemical manufacturing facilities. The most significant equipment leak emission sources are pumps, valves, connectors, sampling connections, compressors, pressure relief devices, and open-ended lines. The major cause of emissions from these components is seal or gasket failure due to normal wear or improper maintenance.

To reduce emissions from leaking equipment, federal, state, and local regulations require LDAR programs. However, recent compliance evaluations conducted by EPA found significantly higher numbers of leaking components than were reported by regulated entities. EPA believes this discrepancy is due to improper monitoring techniques and ineffective management of the LDAR program.

LDAR was selected as a national initiative in the FY 2005-2007 Air Toxics Strategy due to widespread noncompliance and the potential for significant emission reductions when facilities are brought into compliance. In FY 2006, EPA achieved over 250,000 pounds in hazardous air pollutants (HAP) emission reductions from LDAR enforcement and compliance actions. With the large universe of sources subject to LDAR requirements and the high level of noncompliance, EPA will continue to focus on LDAR in the FY 2008-2010 Air Toxics Strategy.

Industrial Flares

Industrial facilities such as chemical manufacturing and petroleum refining facilities utilize industrial flares to control HAP emissions. Clean Air Act regulations require that flares used for control devices must be operated under specific conditions including having a pilot flame present, not producing smoke when operated and only combusting gases with sufficient heat content. In addition, facilities must use good engineering control practices when operating equipment, including following the manufacturer's

design specifications. Failure to follow these requirements constitutes non-compliance. EPA has found that facilities not meeting these operating requirements can release significant levels of HAP emissions. Ensuring compliance with industrial flare requirements could significantly reduce the amount of HAPs emitted from these facilities.

Surface Coating

Since 1990, EPA has promulgated 14 Maximum Achievable Control Technology (MACT) standards for surface coating categories. The surface coating sector is comprised of many facilities that are engaged in the application of coatings on various substrates including metals, paper, wood, etc. The coatings are principally comprised of volatile organic compounds (VOCs), many of which are HAPS. During the coatings application process, HAPs not captured or controlled to the degree required by the MACT standards are emitted into the atmosphere, adversely impacting the air quality and impairing the health of the population both in the vicinity of the facilities and in some cases at substantial distances from the facilities. Some of these HAPS are extremely toxic and are known or suspected carcinogens (e.g., methylene chloride, formaldehyde, acetaldehyde, toluene diisocyanate).

Why Are We Addressing the Problem?

Experience that EPA and State regulators have had with facilities in this sector suggests that many of these facilities are currently out of compliance with the MACT requirements due to lack of understanding of the regulatory requirements, failure to adhere to the requirements, and failure to operate and maintain control apparatus according to manufacturers specifications. Ensuring compliance with these surface coating MACTs could significantly reduce the amount of HAPs emitted from these facilities.

Highlights from the FY 2005-2007 Planning Cycle

Since FY 2005, the EPA regional offices have conducted compliance evaluations at sources subject to over 40 different MACT standards. These compliance evaluations and subsequent enforcement actions will result in over one million pounds of HAP emission reductions by the end of FY 2007. The compliance monitoring and enforcement experience gained across the MACT program over the last three years has been extremely valuable and has contributed to EPA's ability to narrow the focus of the Air Toxics Strategy for the FY 2008-2010 planning cycle.