

# Clean Air Excellence Award Recipients: Year 2006

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## Clean Air Technology

### **Development of the Xact™ Multi-Metals CEMS — Eli Lilly Company, Lafayette, IN**

Eli Lilly and Company (Lilly) and Cooper Environmental Services, LLC, in cooperation with EPA's Office of Air Quality Planning and Standards, developed, installed, and certified a multi-metals continuous emission monitoring system for use at a rotary-kiln hazardous waste incinerator. Xact™ uses a continuous representative sample of stack gas and X-ray fluorescent technology to quantify a variety of metal emissions. This is the first time that a viable multi-metal continuous monitoring system has been approved by EPA as an alternative compliance indicator for multi-metals emission standards. The Xact™ is not only an excellent tool for hazardous waste incinerators, but the technology and associated certification methodology developed through this project will be applicable and valuable when applied to other sources.

### **Giving Pollution the Boot — Enviroboot, Environmental Safety Solutions, LLC, New York, NY**

Two million construction workers per year are repeatedly exposed to respirable airborne silica dust. In January 2006, Environmental Safety Solutions, LLC (ESS) set a goal of providing adequate protection from airborne contaminants in the work place for the construction and demolition trades and developed EnviroBoot™ technology. The EnviroBoot™ not only protects workers on the jobsite, but also creates a cleaner environment in the surrounding area and effectively reduces preparation and clean up costs. The technology allows contractors to meet the standard for permissible exposure to crystalline silica set by the federal Occupational Safety and Health Administration, and can help reduce the risk of silicosis, asthma, tuberculosis, and lung cancer in construction workers.

### **The "HAWK" Leak Detection System — Leak Surveys, Inc., Early, TX**

Leak Surveys Inc. (LSI) has contributed to new procedures of leak detection in the field of petroleum processing and improvements in standard leak detection and repair (LDAR). The Hawk Leak Detection System, through the use of a passive infrared camera, has revolutionized the potential for volatile organic compound emission recognition by broadening the scope of detection through the merging of thermal/infrared imaging.

The technician scans for emissions while watching a digital video screen to verify a leaking component with their own eyes. From emission compliance to safety concerns to equipment damage, the Hawk has the potential to save companies from lost revenue, damage, and fines while reducing the potential of unacceptable levels of human exposure to toxic substances, fires, explosions, and other serious problems. LSI continues to increase the awareness of the industry, to expand its research and development of optical imaging, and to further refine the technology.

#### **Railpower Switching Locomotives: Ultra Clean Power** — Railpower Hybrid Corp., Erie, PA

Railpower Hybrid Technologies Corporation recently released two models of ultra-clean switching locomotives—the Green Goat® hybrid yard switching locomotive and the RP-series branch line or road switcher locomotive. Operating under the slogan “Better Economics, Better Environment,” Railpower has been active in the development, marketing, and production of hybrid technologies applicable in the rail and port sectors. Railpower locomotives have been designated as Ultra Low Emitting Locomotives by the California Air Resources Board and have subsequently been used in government-funded incentive programs, such as the Carl Moyer Program in California and the Texas Emission Reduction Plan. The Green Goat® prototype was developed in 2000, completed in 2001, and tested in 2002. The first hybrid switching locomotive is in service at the Union Pacific Railroad in Roseville, CA; over 100 RailPower Locomotives are currently in service. Railpower produced close to 50 units in 2006 and currently maintains a backlog order of 50 to 100 units.

## Community Action

#### **Cherokee Nation Clean Air Program** — Cherokee Nation Environmental Programs, Tahlequah, OK

The Cherokee Nation became active in ambient air quality monitoring in 1996, and since that time has established a network of criteria pollutant monitors in Oklahoma and New Mexico. As the lead agency in the Inter-tribal Environmental Council (ITEC), Cherokee Nation has been the forerunner in protecting health, natural resources, and the environment for the Tribal Community. Primarily, they oversee 5 stationary air monitoring stations and a mobile air monitoring station. This system comprises the largest tribal air monitoring system in the United States and continues to grow and evolve. The Cherokee Nation also offers technical assistance to the 42 tribes that are members of the ITEC consortia. The Cherokee Nation has provided tribes with data they can use to manage and protect air quality within their tribal lands and boundaries and has filled major data gaps by providing baseline information on air quality in rural areas. The leadership of the Cherokee Nation has provided a strong model for improving ambient air quality applicable to tribal communities across the United States.

#### **Strategic Toxic Air Reduction (STAR) Program** — Louisville Metro Air Pollution Control District Louisville, KY

Louisville, KY citizens, industries, academia, and members of local, state and federal government were motivated to action by the results of a yearlong air monitoring program that detected unsafe levels of several chemicals in Louisville’s air. A multi-stakeholder group, led by the Louisville Metro Air Pollution Control District, formed the Strategic Toxic Air Reduction (STAR) program, a comprehensive toxics program that addresses decades of public concern about potentially harmful effects from air toxics. In June 2005, STAR was adopted and began its work to establish unique regulatory cumulative risk goals for multiple chemicals. STAR

provided the structure for: determining the environmental acceptability of toxic emissions; establishing goals and timetables for large industrial sources; and requiring risk assessment of small industrial, mobile, nonroad mobile, and area sources. This innovative toxics program has the potential to serve as a model at the local, state, and federal level.

## Education/Outreach

### **Carpool Crazy** — City of Lawton & Evergreen Productions, Inc., Lawton, OK

The City of Lawton, OK, a heavily car-dependent city, promoted air quality improvements through the development of the Carpool Crazy program that rewarded residents for sharing rides. The City of Lawton and Evergreen Productions Inc., a public relations firm commissioned by the city, joined forces with local businesses and media, in the summer of 2005, to launch the Carpool Crazy campaign. Carpool Crazy encouraged motorists to share rides and minimize emissions. Over 5,000 Carpool Crazy decals were distributed through live radio remote kick-off events, at the radio stations, and at City Hall. Drivers affixed these decals to the back windows of their cars and spotters were sent into the city to look for vehicles with both the marked decal and two or more people in the vehicle. Instant prizes were announced live on the air and awarded to winning drivers. These drivers were also entered into a grand prize drawing for a special getaway for two. Carpool Crazy increased in environmental awareness, reduced CO<sub>2</sub> emissions, and improved air quality in the Lawton Metropolitan area.

### **Ozone Theater: Setting the Stage for Air Pollution Education** — Mothers for Clean Air, Houston, TX

Ozone Theater is a program that uses interactive, performance-based lessons to teach students about important air quality issues. The program, created by Mothers for Clean Air in partnership with University of Texas Medical Branch Theater Outreach and Education, was developed specifically for the Houston-Galveston area and is closely aligned with state-mandated teaching objectives. The lessons are taught in a classroom setting in the form of a 35-minute interactive game. One lesson, entitled “Pesky Polluters,” is targeted at pre-K through second grade classes and teaches air quality basics and pollution sources. Children are asked to act out different air pollution sources (e.g., bus or factory). The program for grades three through five, entitled “Good Ozone, Bad Ozone,” focuses on ozone and the Air Quality Index (AQI). It uses a set of colored flags that correspond to the colors of the AQI. The students act out safe activities for each of these air pollution levels. After the lesson is complete, the school is issued a free set of AQI flags, which is used as an outdoor air quality warning at the school. According to pre- and post-testing conducted on students receiving these lessons and teachers’ evaluations, Ozone Theater has been especially effective in transmitting air quality lessons to Houston-area students.

## Regulatory/Policy Innovations

### **City of Minneapolis Sustainability Initiative** — Environmental Services, Minneapolis, MN

In 2003, the City of Minneapolis launched a Sustainability Initiative to renew its commitment to building a sustainable infrastructure for present and future residents. The Initiative includes a set of 24 indicators that guide the city’s commitment with over a quarter of these indicators specifically related to improving air

quality. The Indicators include policy and regulatory initiatives that have made significant improvements to the City's air quality. These efforts range from banning smoking in bars to instituting idle-reduction policies for Public Works vehicles, and purchasing hybrid and low sulfur buses. Also Minneapolis, in partnership with the Minneapolis Park and Recreation Board planted 9,600 trees on public lands and provided funding to the nonprofit Tree Trust to distribute an additional 1,000 trees to residents. The City's regulatory and policy innovations support its commitment to ensure clean air for all citizens.

### **Emissions Reductions, Green Building and Renewable Energy** — New Jersey Meadowlands Commission, Lyndhurst, NJ

In July 2006, the New Jersey Meadowlands Commission (NJMC) announced that it had developed a set of comprehensive policies and regulations aimed at improving air quality in the 14-town Meadowlands District in an ongoing commitment to lower the levels of greenhouse gas emissions and improve renewable energy infrastructure. In order to reduce the region's dependence on fossil fuel, the NJMC established a task force to draft a Renewable Energy Master Plan that will articulate strategies and methods to increase energy efficiency and renewable energy applications in the Meadowlands District. In addition, the NJMC has plans to build a photovoltaic solar energy array on its own properties, with the goal of expanding the grid to generate 20MW of renewable energy by 2020.

## Transportation Efficiency Innovations

### **Everybody Wins** — Lane Regional Air Protection Agency, Springfield, OR

In Lane County, OR, the Lane Regional Air Protection Agency (LRAPA) developed an innovative funding and outreach program, called Everybody Wins, designed to help truckers reduce their idling time through the use of auxiliary power units (APUs). APUs are small generators that are added to a truck to provide the amenities of heating, cooling, and power for long haul truckers without needing to idle the main engine. The Everybody Wins program provides zero down, interest free financing to independent truck owners to promote the use of APUs. This program has resulted in the installation of 350 APUs to date. Because the use of an APU can potentially save \$480.00 per month in fuel costs, the program demonstrates to truck owners the economic benefits of installing an APU. The program has attracted interest and increased awareness of idle reduction technologies among the thousands of drivers who use the I-5 corridor in the western states.

## Thomas W. Zosel Outstanding Individual Achievement

### **Ron Harris, Former County Judge** — Collin County, TX

For the past 15 years, Judge Ron Harris of Collin County, Texas, has not only shouldered the vast responsibilities of a County Judge, but has also committed himself to improving air quality in the State of Texas and in the Dallas-Fort Worth (DFW) area. Judge Harris serves as Chair of the North Texas Clean Air Steering Committee (NTCAS) and is founder of the Texas Clean Air Working Group (TCAWG). He was instrumental in the development of the DFW ozone nonattainment plan, and is now working to provide direction on the future 9 county ozone plan through NTCAS for the new 8 hour standard. Judge Harris has been an advocate for partnerships of local elected officials and stakeholders with the State of Texas

Commission on Environmental Quality and Environmental Protection Agency in air quality planning. During his tenure as chairman of TCAWG, Judge Harris led the way to secure funding for the Texas Emission Reduction Program. This program, which has become a model across the country, is now funded at over \$150 million per year and provides more funds for diesel engines than the rest of the country combined. Mr. Harris' leadership for clean air and innovative initiatives has resulted in great strides in improving Texas air quality.

## Gregg Cook Visionary Program

### **3M's Sustainability Program Reduces Air Emissions Worldwide — 3M, St. Paul, MN**

3M introduced its Pollution Prevention Pays (3P) program over 30 years ago and has since set an example as a company committed to environmental stewardship. 3M recognizes that sustainable development and a commitment to reducing air emissions contributes to its long-term success. 3M serves as a model for sustainable development with emphasis on three principles: effective environmental stewardship, meaningful contributions to society, and the creation of economic value. 3M has set corporate environmental goals such as reducing volatile organic air emissions indexed to sales.

It similarly values community and educational outreach and gives financial support to local and regional groups that share its goals for sustainable development. 3M is working to reduce its greenhouse gas emissions through implementing transportation efficiency measures. Through this multi-pronged approach, 3M has dramatically reduced its air and greenhouse gas emissions worldwide.