

CEMENT INDUSTRY ENVIRONMENT AND ENERGY AWARDS

4th Annual Award Program

A program designed to foster continuous environmental improvement in the U.S. cement industry.



***Recognizing Individual Facilities that
Exemplify the Spirit of Continuous
Environmental Improvement***

SPONSORED BY:

Portland Cement Association
Cement Americas Magazine

Cement Association of Canada
World Resources Institute

U.S. Environmental Protection Agency
World Wildlife Fund.

Cement Industry Environment and Energy Awards

BACKGROUND

In 2000, as part of its renewed environment and energy strategic plan, the Portland Cement Association initiated a program designed to foster continuous environmental improvement in the U.S. cement industry. One element of the program is to recognize individual facilities that exemplify the spirit of continuous environmental improvement and back up this spirit with action.

PCA and Cement Americas Magazine presented the first Cement Industry Environmental Awards in 2002 to the winners for 2001. The awards program is open to any cement manufacturing plant in North America. The awards honor activities conducted during the previous calendar year. The judges for the awards represent independent groups such as PCA, Cement Americas Magazine, the Cement Association of Canada, World Resources Institute, the U.S. Environmental Protection Agency, and the World Wildlife Fund.

AWARD CATEGORIES

The Cement Industry Environment and Energy Awards are comprised of six award categories.

Environmental Performance—this category honors those facilities that take steps beyond those contained in environmental laws, regulations, permits and requirements to minimize their impact on the environment. Recognition for this award is given for pollution prevention, waste minimization, distinctive environmental controls, environmental management systems, and facility recognition.

Land Stewardship—efforts to protect and enhance the surrounding land through landscaping, species protection, and remediation and rehabilitation of quarries, wetlands, and other features are recognized in this category.

Outreach—facilities that strive to enhance community, employee, and government relations through communication, partnerships, voluntary efforts, contributions, and other measures are honored in this award.

Innovation—this category recognizes the development and application of innovation technologies and techniques relevant to environmental protection or energy efficiency.

Energy Efficiency—this category focuses on energy planning, applications of efficient technologies and practices, and climate change mitigation efforts are rewarded in this category.

Overall Environmental Excellence—a facility that demonstrates excellence in several or each of the above categories is recognized with this award.



Portland Cement Association
5420 Old Orchard Road
Skokie, Illinois 60077-1083
847.966.6200 Fax 847.966.9781
www.cement.org

Environmental Performance: *St. Lawrence Cement, Mississauga, Ontario Plant*

St. Lawrence Cement's Mississauga plant, which won the environmental performance award in 2002, once again excelled in this area last year. As the first cement plant in North America to achieve ISO 14001 certification, Mississauga has a strong environmental management system that encompasses all aspects of the plant's operations. This approach also manifests itself in the development of a sustainable environmental performance business plan and an employee awareness program. Specific accomplishments during the year included achieving secondary plume opacity of zero percent, voluntarily testing their stack emissions, reducing roll-off waste by 30% and waste management costs by 22%, utilizing by products to reduce natural resource consumption, and further reducing emissions of nitrogen oxides, sulfur dioxide and car-

bon monoxide by 8-16 percent below already low levels. These and other accomplishments were recognized by Ontario Ministry of the Environment, Canada's Climate Change Voluntary Challenge and Registry Inc., and local environmental leaders.

Runner Up:

Lafarge North America Inc., *Alpena, Michigan Plant*

Finalists:

Suwannee American Cement, *Branford, Florida Plant*

CEMEX, *Fairborn, Ohio Plant*

Dragon Products, *Thomaston, Maine Plant*

Land Stewardship: *CEMEX, Fairborn, Ohio Plant*

The CEMEX Fairborn Ohio facility won the award for land stewardship. In 2004, this plant accomplished two major land stewardship rehabilitation projects.

The Fairborn plant completed various stages of reclamation for a 200 acre limestone quarry during the year. This included a complete reclamation release of 52 acres and partial release of 150 acres that were recently vegetated. They also reclaimed several clay mining areas during the last two years. This reclaimed open space provides for wildlife habitat and promotes biodiversity.

Their second project was the demolition of their 80-year old cement manufacturing plant. Closed in the 1990s, the plant was the source of aesthetic concerns for the neighbors. This

voluntary effort proved a significant task as the building needed to be abated of asbestos. Construction rubble was segregated so that inert materials could be used to backfill an old quarry pit for reclamation purposes. Nearly 10 acres were backfilled with these materials. At the completion of the project, the plant received numerous compliments from local political and civic leaders and from the general public.

Runner Up:

Holcim (US) Inc., *Dundee, Michigan Plant*

Finalists:

Lafarge North America Inc., *Ravena, New York Plant*

Lafarge Canada Inc., *Brookfield, Nova Scotia Plant*

Outreach: *Lafarge North America Inc., Tulsa, Oklahoma Plant*

The Lafarge Tulsa facility was selected to receive the top honor in the outreach category because of their multifaceted outreach program. Their program encompassing projects for wildlife habitat, educational alliances, community and environmental organizations, plant tours, community affairs, charitable sponsorships, Earth Day events, employee programs, communication and governmental outreach. The Tulsa outreach program places special emphasis on environmental projects, such as wildlife habitat conservation and renewal, environmental educational alliances, and Earth Day festivities. In addition, the plant environmental manager serves on

a local air quality committee, and the plant has an active government affairs program that ensures their voice in their political process. Finally, the plant holds monthly plantwide meetings focused on internal communications.

Runner Up:

St. Lawrence Cement, *Mississauga, Ontario Plant*

Finalist:

Lafarge North America Inc., *Alpena, Michigan Plant*

Innovation: CEMEX, Knoxville, Tennessee Plant

The award for innovation was nabbed by the CEMEX Knoxville plant because of a program embarked upon in 2004 to evaluate various technologies to reduce nitrogen oxides (NOX) emission levels. Plant personnel were determined to go beyond regulatory requirements to improve their NOx levels and began exploring alternative abatement methods. A water injection system was one of the technologies studied, and test results showed that they could reduce NOX emission by approximately 15%. A continuous emissions monitoring system was also installed at about the same time to measure sulfur dioxide and carbon monoxide in addition to NOX. CEMEX finds this water injection technology effective and simple to

use and install, providing highly cost-effective reductions. In addition to this emission reduction program, CEMEX will continue to evaluate and test other technologies and have committed over a million dollars to this project.

Runners Up:

St. Lawrence Cement, *Mississauga, Ontario Plant*
Lehigh Cement Company, *Mason City, Iowa Plant*

Finalists:

Lafarge North America Inc., *Calera, Alabama Plant*
Dragon Products, *Thomaston, Maine Plant*

Energy Efficiency: California Portland Cement Co., Colton, California Plant

The California Portland Cement Company's Colton Plant is the winner of the energy efficiency award. In 2004 California Portland worked closely with the EPA ENERGY STAR program to create a comprehensive corporate energy management program along with an energy management team. California Portland's policy strives to provide continuous improvement through some of the following actions:

- Establish baseline energy use through new and existing metering and other reporting methods
- Set goals based on benchmarking and industry best practices
- Perform audits to determine savings opportunities
- Implement energy saving ideas through capital spending, maintenance, etc.
- Measure improvements
- Continuous evaluation of the program to determine effectiveness

- Recognize achievements
- Provide training and awareness of energy efficiency best practices
- Establish energy performance goals and implementation initiatives

These strong energy planning principles are infused throughout the company, resulting in an energy consumption reduction of 4.5 percent from 2003 levels, which translates into savings of \$842,000. These energy reductions also mean reducing the use of fuel, burned both at that the plant and at power plants to produce electricity. These reductions mean reductions in emissions of pollutants and greenhouse gases.

Runner Up:

St. Lawrence Cement, *Mississauga, Ontario Plant*

Overall Environmental Excellence: St. Lawrence Cement, Mississauga, Ontario Plant

St. Lawrence Cement's Mississauga plant was selected as the winner of the overall environmental excellence award. The facility's 2004 entry was the winner in the environmental performance category as well as the runner up for outreach, innovation, and energy efficiency. In addition, St. Lawrence has taken great strides to reduce the noise level at the plant: reducing noise complaints to zero. To do so, several pieces of state-of-the-art equipment were purchased and installed at the plant during the year specifically to reduce noise output,

but some will have the added benefit of enhancing energy efficiency and environmental performance.

Runner Up:

CEMEX, *Fairborn, Ohio Plant*

Finalist:

Lafarge North America Inc., *Alpena, Michigan Plant*