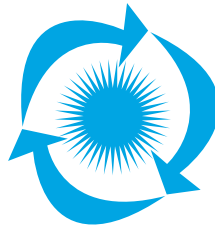




PORTLAND CEMENT ASSOCIATION SUSTAINABLE MANUFACTURING

2006



**PCA**  
**ENERGY &  
ENVIRONMENT  
AWARDS**

*Preserving Our World*

**PORTLAND CEMENT ASSOCIATION**

**2007 SPRING MEETING**

HYATT REGENCY

LA JOLLA, CALIFORNIA

MONDAY, MARCH 19, 2007





## ENVIRONMENTAL SPIRIT

**In 2000, the Portland Cement Association** launched a program 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 and honors activities conducted during the previous calendar year. The judges represent independent groups such as PCA, *Cement Americas*, the Cement Association of Canada, World Resources Institute, the National Stone Sand and Gravel Association, the U.S. Environmental Protection Agency, the National Ready Mix Concrete Association, the U.S. Department of State, and the World Wildlife Fund.

## ENVIRONMENTAL PERFORMANCE

*This category honors facilities that go beyond laws, permits, and regulations to minimize their impact on the environment.*

**Runner Up:**

**Suwannee American Cement**  
Branford, Florida

**Finalist:**

**Holcim (US) Inc.**  
Theodore, Alabama

**Winner:**

**St. Marys Cement Inc. (Canada)**  
Bowmanville, Ontario

The Bowmanville plant instituted a state-of-the-art environmental management system and achieved impressive reductions in emissions during 2006. A lime injection system reduced sulfur dioxide emissions by 53 percent compared to the previous year. The lime reacts with the sulfur dioxide to form calcium sulfate that remains solid therefore producing no additional waste stream. Installation of a selective non-catalytic reduction system utilizing ammonia injection reduced nitrogen oxide emissions by 18 percent. The ammonia reacts with the NOx to form water and nitrogen. The facility went far beyond regulatory requirements in achieving these reductions.

## LAND STEWARDSHIP

*This category recognizes efforts to protect and enhance the surrounding land and wild life.*

**Runners Up:**

**St. Marys Cement Inc. (U.S.)**  
Charlevoix, Michigan

**St. Marys Cement Inc. (Canada)**  
Bowmanville, Ontario

**Finalist:**

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

**Winner:**

**CEMEX, Davenport, California**

The CEMEX Davenport plant consistently exceeds reclamation requirements by planting native vegetation and initiating reclamation ahead of schedule. In 2006, the plant graded, contoured, and planted 16 acres with diverse native grassland habitats and northern marine chaparral habitats. The plant also conducts a sustainable forestry management program that annually plants 20,000 redwood seedlings. In 2006, a portion of the timber harvest was allocated to community and conservation projects. The CEMEX property provides special habitat for a variety of wildlife and is home to several endangered and threatened species. In 2006, the plant set aside habitat for the San Francisco dusky-footed woodrat, a California species of concern.



## OUTREACH

*This category honors activities that enhance community, employee, and government relations.*

**Runners Up:**

**St. Marys Cement Inc. (U.S.)**  
Charlevoix, Michigan

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

**Finalists:**

**CEMEX**  
Davenport, California

**Holcim (US) Inc.**  
Morgan, Utah

**Winner:**

**Holcim (US) Inc., Theodore, Alabama**

The Theodore plant worked in 2006 to make its community a cleaner place to live and work. The plant participated in the annual household hazardous waste recycling day sponsored by the Alabama Coastal Foundation. This event allows local residents to recycle their hazardous materials rather than discarding them as household trash. In the spring of 2006, the Theodore plant held an event to remove abandoned crab traps from Mobile Bay and its surrounding waterways. The plant also participated in the Nineteenth Annual Alabama Coastal Cleanup Day, where volunteers remove trash and debris from coastal waters. Plant employees organized the event for the Theodore Industrial Canal and removed 3,000 pounds of debris from the canal.

## INNOVATION

**Winner:**

**CEMEX, Knoxville, Tennessee**

*This category recognizes the development and application of innovative technologies relevant to environmental protection or energy efficiency.*

This CEMEX plant has been an innovator in the development of technologies to reduce emissions. CEMEX uses water injection to reduce nitrogen oxide emission by 15 percent. In 2006, CEMEX identified oily water from oil collection centers as an alternative source of water. The water, which contains less than five percent oil, is transported to the facility for the water injection program. In 2006, CEMEX used approximately 261,315 gallons of the oily water material in the kiln at varying injection rates—an innovative use of a material that was previously disposed of in publicly-owned treatment works. This technique is beneficial to the environment and economical for the company.

## ENERGY EFFICIENCY

***This category focuses on energy planning, applications of efficient technologies and practices, and climate change mitigation efforts.***

**Runner Up:**

**St. Marys Cement Inc.  
(Canada)**

Bowmanville, Ontario

**Finalist:**

**Lafarge North America Inc.**

Calera, Alabama

**Winner:**

**California Portland Cement Company  
Mojave, California**

The California Portland Cement Company's Mojave plant is the first repeat winner in the same category in the six-year history of the awards. It reduced its greenhouse gas emissions in 2006 by 31,247 tons compared to 2005. To further improve efficiency and reduce emissions, the plant signed a 25-year contract with a wind energy company that ensures a large portion of the power it consumes will be from a renewable energy source. Examples of other energy-saving focus areas include high efficiency process improvements, electrical and lighting systems, compressed air, mechanical systems and drives, plant operations, engineering and maintenance, and public education.

## OVERALL ENVIRONMENTAL EXCELLENCE

***This award recognizes a facility that demonstrates excellence in multiple categories.***

**Runner Up:**

**Lafarge North America Inc.**

Sugar Creek, Missouri

**Finalists:**

**CEMEX**

Davenport, California

**Suwannee American Cement**

Branford, Florida

**Winner:**

**St. Marys Cement Inc. (U.S.), Charlevoix, Michigan**

Honored as the runner up in the land stewardship and outreach categories, the St. Marys Charlevoix plant demonstrates excellence in several aspects of environmental responsibility. In 2006, the plant installed a new indirect firing system that reduced both fuel consumption and emissions. The plant also replaced power plant fly ash with on-site shale, overburden, and purchased bottom ash to reduce mercury emissions. Close to a residential area, the facility designed and installed silencers that reduced noise. Working with the Michigan Department of Natural Resources, St. Marys maintained a fish-stocking program for Chinook salmon fingerlings and worked to encourage the regional resurgence of the bald eagle by constructing nesting platforms on its property.





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