



PORTLAND CEMENT ASSOCIATION SUSTAINABLE MANUFACTURING



PCA ENERGY & ENVIRONMENT AWARDS

Preserving Our World

PORTLAND CEMENT ASSOCIATION

2006 SPRING MEETING

HYATT REGENCY

SAN ANTONIO, TEXAS

MONDAY APRIL 3, 2006



Concrete
Thinking
for a sustainable world



Portland Cement Association



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. This year the awards are truly North American, with winners from Canada, Mexico, and the United States.

ENVIRONMENTAL PERFORMANCE

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

Runner Up:

Holcim Apasco Orizaba Plant
Ixtaczoquitlan, Veracruz

Finalists:

Essroc Cement Corp.
Nazareth, Pennsylvania

Suwannee American Cement
Branford, Florida

Winner:

Holcim (US) Inc., Theodore, Alabama

The Theodore plant has compiled comprehensive data to demonstrate its environmental performance and improvements during 2005. Specific focus areas include opacity control, stack emission testing, continuous emission monitor installation, and reduction of carbon monoxide emissions. This Holcim facility went far beyond their legal requirements in achieving these results. The facility also utilized multiple by-products from other industries as waste minimization, natural resource conservation, and industrial ecology measures. Holcim has dramatically reduced water discharge and has nurtured vibrant wetlands on their Alabama property. The plant generates no cement kiln dust.

LAND STEWARDSHIP

This category recognizes efforts to protect and enhance the *surrounding* land through landscaping, species protection, and remediation and rehabilitation of quarries, wetlands, and other features.

Runner Up:

CEMEX (Quarry)
Wampum, Pennsylvania

Finalists:

St. Mary's Cement Inc. (Canada)
Bowmanville, Ontario

Buzzi Unicem USA Inc.
Stockertown, Pennsylvania

Winner:

Lafarge Canada Inc., Bath, Ontario

Canada's Bath facility has developed a broad and effective land stewardship program. Its former CKD landfill has been transformed into a spot that nurtures the area's wildlife with a seed mix that grows wildflowers, attracts pollinating insects, and feeds deer, turkey, and other wildlife. Working the Wildlife Habitat Council and Ducks Unlimited, Lafarge has installed multiple nesting boxes and plants around a pond to support bird, fish, amphibian, and mammal species. An old quarry is being converted into a multi-curricular children's outdoor learning center that includes trails, a pond, and a fossil hunting area. Areas around the plant grounds have been landscaped primarily with native plant species, including more than 26,000 new trees in 2005, which help absorb atmospheric carbon dioxide as a greenhouse gas reduction measure.



OUTREACH

This category honors activities that enhance community, employee, and government relations through communication, partnerships, voluntary efforts, contributions, and other measures.

Runner Up:

St. Mary's Cement Inc. (U.S.)
Charlevoix, Michigan

Finalist:

Lafarge Canada Inc.
Bath, Ontario

Winner:

Holcim Apasco Orizaba Plant,
Ixtaczoquitlan, Veracruz

Holcim Apasco's Orizaba Plant takes outreach to a new level. Rather than just sharing information, Holcim Apasco sustains the community with outreach efforts having a strong environmental emphasis. Out of a desire to reforest a closed quarry, the Orizaba plant established a Training Center for Agriculture and Forestry that now reaches out beyond the company property to address conservation and ecological issues in the region and provide direct employment and skill acquisition training for community members. The plant also sponsors a Kids Ecological Vacation Camp and activities related to World Environment Day and Health, Safety, and Environmental Awareness Week.

INNOVATION

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

Runner-Up

Lafarge North America Inc.
Alpena, Michigan

Finalists

Alamo Cement Company
San Antonio, Texas

Lafarge Canada Inc.
Bath, Ontario

Winner:

Essroc Cement Corp., Nazareth, Pennsylvania

This Essroc plant has expanded over time and grown around the town of Nazareth. Because of this evolution, the finish mill operations are located near the quarry, but both are about 1.5 miles from the pyroprocessing units. Historically this has required 162,000 truck trips per year through the town to bring limestone to the kilns and clinker back to the finish mills. In 2005 the plant devised and installed a high-tech conveyor system that transports limestone 1.7 miles from the quarry to the kilns and clinker 1.5 miles from the kilns to the finish mills. The conveyor is highly innovative in that it loops back at each end to carry materials over the same surface in both directions. It also includes two tunnels under the town and a bridge 200 feet over the quarry floor that spans 1,000 feet. Finally it is entirely covered and soundproofed for minimal environmental impact.

ENERGY EFFICIENCY

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

Runner Up:

**Holcim Apasco
Orizaba Plant**
Ixtaczoquitlan, Veracruz

Finalist:

Giant Cement Holdings, Inc.
Bath, Pennsylvania

Winner:

California Portland Cement Company,
Mojave, California

In 2005, the Mojave Plant worked closely with EPA's Energy Star program to enhance its corporate energy management program and the effectiveness of its energy management team. For the second year in a row, California Portland has been named Energy Star's Partner of the Year for all industries. Specific actions at the Mojave plant include extensive benchmarking to assess performance, set goals, and implement action plans. The plant saved hundreds of thousands of dollars each year and reduced direct and indirect emissions of greenhouse gases and other compounds. Examples of focus areas include high-efficiency process equipment, electrical and lighting systems, compressed air, mechanical systems and drives.

OVERALL ENVIRONMENTAL EXCELLENCE

This award recognizes
a facility that demonstrates
excellence in several
or each of the
above categories.

Runner Up:

Lafarge Canada Inc.
Bath, Ontario

Finalist:

Suwannee American Cement
Branford, Florida

Winner:

Holcim Apasco Orizaba Plant,
Ixtaczoquitlan, Veracruz

Because of its achievement in winning the outreach award and runner up status in both the energy efficiency and environmental performance categories, Holcim's Apasco plant was named the winner for overall environmental excellence. In addition to the outreach activities noted above, the Orizaba facility has comprehensive environment and energy programs that take into account coordinated management systems, such as ISO 14001. The plant also has a strong land stewardship program, that is typified by community of 280 sheep that tend to the grounds.





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