Bath Plant January 2006 Issue 3

Bath plant accepts award for environmental excellence

They helped plant the trees so it was only fitting to invite them to hoist the flag. The environmental award flag flies proudly outside the Bath plant in recognition of its latest award. Students from Odessa, Bath and Napanee helped hoist the flag during a September 21 reception to celebrate the environmental efforts of Bath plant employees.

Local schoolchildren help raise the newly won flag

Plant Manager Glenn Widish accepted the Lafarge North America award for environmental excellence, which is given out each year to plants that have shown technical and leadership innovation in environmental performance. "This reception is an opportunity to thank employees for their efforts to make the environment around the plant friendly to local wildlife," Widish said.

Widish singled out the hard work of Nick Veriotes, Todd Thompson and Steve Noyse. Veriotes joined efforts with the local children to install bird boxes around a storm water pond and lagoon while Thompson and Noyse headed a team that made and installed floating duck nesting sites within a storm water pond.

The Bath plant received the environmental award for these innovative projects as well as several others. Employees helped plant trees and shrubs on nearby farmland with the assistance of local schoolchildren. The plant also partnered with local students to plant more than 30,000 trees under Trees for Peace and Forest 2020.

Local schoolchildren planting trees on Lafarge property

Loyalist Township Reeve Clayton McEwen and Thelma Redick of the Wildlife Habitat Council also attended the reception. McEwen officially unveiled a certification sign in from of the plant. "I would like to thank Bath plant employees for making a positive contribution to the environment and to local wildlife. Lafarge is a model of how corporations can work with other organizations for the long term benefit of their community."

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The award attracted the attention of the local media, including Kingston This Week and CKWS-TV, which covered the reception on the 6 o'clock news. This marks the second time that Bath plant employees have been awarded for environmental initiatives. In August 2004 the plant received an international award and certification from the Wildlife Habitat Council for its contributions to wildlife habitat conservation.

Waterfowl on Lafarge Property

The Bath plant's environmental efforts are part of a long-term plan. Over the next five years Lafarge will develop a forest management plan that includes planting 40,000 more trees in the area around the plant. In addition Nick Veriotes plans to develop an outdoor learning center and a nature trail in the nearby forest.

Glenn Widish accepting 2005 Environmental Award from David Carroll, Lafarge Vice President, Environment

Welcome Naga Boddu and Doug Anderson to the Bath Plant

The Bath Plant is pleased to welcome two new employees, Doug Anderson and Naga Boddu.

Doug Anderson

Doug began work September 1st as Quality Manager specializing in chemistry, where he supervises four employees. "My objective is to maintain the highest quality and uniformity for cement products produced at this facility," he explains. Doug, who has been with Lafarge for almost 20 years, is enjoying his new position and has settled into the Camden East area with his wife Cheryl and three teenage children.

Doug and his family moved to the Kingston region from Vienna, Austria, where he worked at the Lafarge Technical Centre for about four years. Originally from Nova Scotia, Doug also worked at the Lafarge plants in Richmond, British Columbia and Brookfield, Nova Scotia. "I looked forward to coming here because I've heard the Kingston area is the Maritimes of Ontario," he says. "People are so friendly and easygoing."

Naga Boddu

Naga Boddu joined both Lafarge and the Bath Plant November 7. He is an Engineer in the Process Department where he is working to optimize the cement manufacturing process while working with alternative fuels and raw materials. Naga, who immigrated to Canada in 2003 from India, has 17 years experience in the cement industry there. "I feel welcome at the plant and believe I can contribute a great deal because of my past experience," he says.

Naga earned Bachelor's and a Master's degree in chemical engineering from India and recently completed a Master's in environmental engineering from the University of Windsor. "It's quite different than working in India. There's a very good information system and data base here and all employees are treated equally and participate with management," he adds.

Naga, with his wife Padma and two teenage children will be relocating to the area from Windsor.

Heath Unit Assessment

Eleven government agencies reviewed public comments and questions about Lafarge's alternative fuels project – which were provided to the Ministry in over 100 individual letters. This formal review included the Kingston, Frontenac, and Lennox & Addington Health Unit which in an October 28, 2004 letter stated that "this Health Unit has no objections to the use of alternative fuels … at the Lafarge Bath cement plant." Other agencies included Environment Canada, Ministry of Agriculture & Food, and seven Ministry of the Environment Departments.

Bath Plant donations committee supports Vicki Keith's Million Dollar Marathon

Vicki Keith and John Munro receive a cheque from Glenn Widish, Bath Plant Manager while members of the Plant's Donation Committee look on. They are Nick Veriotes, Stacy Daicar, Greg Moore, and Dave Collins (L-R)

Children with disabilities and their siblings will benefit from the generosity of Lafarge and the Bath Plant donations committee. The committee has earmarked $3,500 for Amherst Island swimmer Vicki Keith's Million Dollar Marathon, a fundraiser to build a new pool for the Kingston Family YMCA. The pool will be home to the Kingston Y Penguins, a swim team for children with physical disabilities and their able-bodied brothers and sisters. Vicki and her team have now reached their million-dollar goal.

"I am pleased that the Bath plant chose to donate to the Million Dollar Marathon and would like to thank them for their support on behalf of the Kingston Family YMCA. This donation will help make a positive difference in the lives of many children who live with physical disabilities," Vicki said.

Vicki Keith, who holds the world record for swimming the butterfly, broke her own record in August 2005 for the longest solo swim in open water when she swam Lake Ontario, battling high winds, strong currents and cold temperatures. The 80.2 kilometre route saw her travel from Point Petre in Prince Edward County to Long Point, then diagonally to the north shore of Amherst Island, along Amherst Island to Griffin Point, across to Fairfield Park and then along the shore to Lake Ontario Park.

Donations Committee member Stacy Daicar, Assistant Controller at the Bath Plant, says the entire committee was understandably impressed by Vicki's

Did you know?

Not only will the use of scrap tires for energy recovery produce emissions well within strict, new emission limits, their use will reduce NOx emissions by 10-40% and CO2 emissions by 5-15%.

Santa Arrives!

dedication. "We thought it was an excellent cause to support and had been approached by area residents about the project," she explains. "And since Vicki lives on Amherst Island and the project will benefit a larger area, it falls within our geographical boundaries in the Bath region." Details about the Million Dollar Marathon and Vicki's charitable efforts can be found on her website www.penguinscanfly.ca

The Million Dollar Marathon is only one of several charitable organizations and community groups that Lafarge is pleased to support. The donations committee has dispersed more than $48,000 this year in the Bath region, including $25,000 to the local United Way campaign. Bath Plant employees raised $12,500 and the company contributed an equal amount.

Lafarge is a dedicated supporter of the Bath Canada Day fireworks donating $8,000 to the popular event in 2005. Through the donations committee the company also gave $2,500 to the Fairfield-Gutzeit Historical Society and $2,000 each to three worthy causes; Sandhurst Public School, the local Boys and Girls Club and Ducks Unlimited. The Bath Plant is also a proud supporter of Loyalist Township - Light Up the Season, Napanee Rep and House League Hockey and the Bath Lions Club, providing Christmas baskets to needy families.

Local public enjoying a horse drawn wagon ride at the Light Up the Season event

Stacy Daicar's colleagues on the donations committee include Bath Plant employees David Collins, Greg Moore and Nick Veriotes. The committee meets once a quarter to review fundraising requests and make decisions about which worthwhile causes to support. Committee guidelines target community development, health and safety, youth and family development, education and environmental causes.

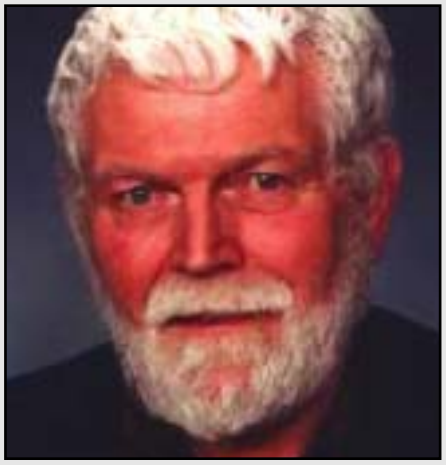
2005 Bath Canada Day Parade.

"Our main objective is to support programs, groups and events that strengthen the communities of Bath, Amherstview, Greater Napanee and Amherst Island," Stacy explains. "We support organizations with valuable programs and services that demonstrate accountability, acceptable fund-raising practices, ethical principals, quality management and strong financial standing." For more information about the donation committee contact Stacy Daicar at 352-7711 ext. 134.

The Science

Governments around the world have studied the science of alternative fuels. The United Kingdom's Public Health Agency carried out a comprehensive review of all of the available research and concluded that alternative fuels are safe. The US Environmental Protection Agency has issued a Policy Position in favour of the use of scrap tires as an energy source for cement plants

Queen's study supports the tire-derived-fuel project



Professor Barrie Jackson

A Queen's University engineering professor believes that the Lafarge plan to use scrap tires to make cement makes good environmental sense. Professor Jackson concludes in his report that the Bath plant's tire derived fuel project would produce emissions well within environmental standards.

In response to suggestions from the community, Lafarge agreed to fund an independent study and asked the Dean of Engineering at Queen's to recommend an impartial engineering professor to review the project. As a result Barrie Jackson, a chemical engineer with 33 years of industry experience and 18 years as Adjunct Professor with the Chemical Engineer faculty at Queen's University, undertook an overall review of the management of scrap tires.

In his report "Scrap Tire Management", Professor Jackson concludes that the Bath plant's plan to use tire-derived fuel is not harmful to the environment. "When one considers the composition of tires and the combustion conditions encountered when fed mid-kiln as whole tires, we see no reason why the emissions should be substantially different than at present."

Queen's undertook an earlier review of the management of scrap tires and found that they have no other major use other than tire-derived fuel. Markets exist for scrap tires such as retreading, grinding or shredding them into rubber mats – but these markets are limited. "Post consumer scrap tires represent a considerable amount of potential energy. Since there are no major other uses for these tires it is economical to recover this energy as tire derived fuel," Professor Jackson says.

There are an estimated 10-14 million tires scrapped each year in Ontario. Most end up in landfills or tire dumps, posing serious environmental risks. Tire piles are ideal breeding grounds for mosquitoes, which can spread diseases like the West Nile virus. Land filled tires also pose a fire risk.

Professor Jackson also notes that tire derived fuel is commonly used in Europe, Asia and North America in power plants, pulp and paper boilers and cement kilns. He points to a 2005 report by the U.S. Environmental Protection Agency that recognizes the use of tire-derived fuels as a viable alternative to fossil fuels. Based on more than 15 years of experience with more than 80 facilities, the Agency supports the responsible use of tires in Portland cement kilns and other industrial facilities.

The Queen's report produced similar conclusions as a University of Sherbrooke paper completed in 1995. This report concluded that scrap tires can be used in an environmentally sound manner as a source of fuel for cement plants. The study identified eight benefits for the use of scrap tires in cement kilns.

View of kiln showing approximate mid-kiln location of scrap tire injection point.

Quick Facts

Based on recent data, the Bath plant is in the top 25% of Lafarge's best plants around the world for particulate (dust) emissions from the stack. The plant uses best available control technology for particulate control.

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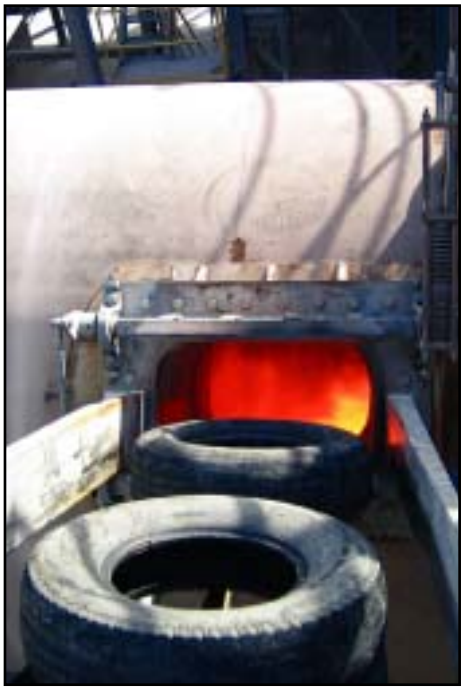
Alternative fuels project – another step ahead



Scrap tire being introduced into kiln.

The Lafarge Bath plant is one step closer to using alternative fuels to reduce the amount of coal used to fuel the kiln. The project has already undergone an intensive two-year review with the Ministry of Environment and other independent agencies. The Ontario government has determined that the project can be reviewed under the Environment Protection Act (EPA) rather than the Environmental Assessment Act.

"Lafarge has drawn on years of experience to design this project," explains Bath Plant Manager Glenn Widish. "A number of agencies – including the U.S. Environmental Protection Agency and the U.K. Health Protection Agency – support the use of alternative fuel sources as do other extensive

In making its decision, Ministry of Environment engineers and scientists confirmed that emission estimates prepared by Lafarge show there would be no significant negative impact from using alternative fuels. Under the EPA, the Ministry of Environment will develop specific requirements that Lafarge must meet, including a certificate of approval for emission standards.

The Ministry of Environment formally consulted the Kingston, Frontenac, and Lennox & Addington Health Unit. In the Unit's written response they concluded that the Health unit "has no objections to the use of alternative fuels … at the Lafarge Bath cement plant" and provided 3 recommendations for the Ministry's consideration.

Glenn Widish

Glenn Widish is confident that Lafarge will continue to meet emission standards. "The application of stringent standards means that this project will be subject to limits that are among the strictest in the world – ours may well be the first cement plant in Ontario to operate under these standards," he said. "This is an exciting opportunity to invest in alternative fuels technology and improve air emissions."

The Bath plant has consulted extensively with the local community and environmental groups so that the

Many people support the plan to use alternative fuels, including Napanee Ford dealer Larry Pringle. "I live near the Bath plant and believe Lafarge should be commended for this project. It is a strong signal of the synergies that can be developed between the private sector and government to address our scrap tire problem."

Ted Davie, a neighbour of the Bath plant and Chair of the Lafarge Citizen Liaison Committee echoes that sentiment. "As we've grown to understand this project, we believe that it is a step forward for the plant, with benefits to the environment, the community and the company. We look forward to seeing it underway."

In response to community requests, Lafarge asked Professor Barrie Jackson of the Department of Chemical Engineering at Queen's University to review data around the use of tire derived fuel. "I've looked at the project and at the evidence. It shows that tire derived fuel use is essentially cleaner than the use of eastern coal," Professor Jackson concludes.

Did you know?

Cement plants are using scrap tires as an energy source in locations as close as Montreal. Scrap tires are in use in 3 Canadian Provinces and 22 US states.

The initiative is consistent with efforts to reduce waste and has the support of Rob Cook, Executive Director of the Ontario Waste Management Association. "Our members' experience is that using alternative fuel sources competes with landfills, not recycling. Tires used as alternative fuel would otherwise end up being stockpiled, not recycled and as such are an important part of an overall hierarchy of waste management."

Lafarge Bath plant.

Ministry Official's Inspect US Cement Plant using Scrap Tires

A view of the Town of Whitehall, PA from Lafarge's cement plant

Ontario Ministry officials inspected Lafarge's tire-derived-fuel system at its Whitehall, Pennsylvania plant in 2004. They met with local government officials, representatives of the community, union representatives, and operations personnel from the plant. Lafarge experience shows that tire-derived fuel systems are odourless and smokeless and this was a chance to witness this in-person.

On another occassion, local residents visited Lafarge's St. Constant plant near Montreal. The St. Constant plant started using scrap tires about a decade ago. As in Europe, the Quebec Government recognizes energy recovery as the fourth "R" and has a program to manage scrap tires. The St. Constant plant also uses tires from Eastern Ontario.

Scrap Tires remain on trailers until they are ready for use. Shown above, a trailer being tipped to remove tires.

Each tire is weighed to allow the plant's control system to fine tune kiln operational parameters.

Comments or questions? contact Rob Cumming at (613) 352-7711 x 214,
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