

Lafarge Bath Plant

concrete connection

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bringing materials to *life*

An Important Message to Our Neighbours



This month, we would like to introduce you to Mike Kralik, our new Plant Manager. Mike came to the Bath Plant in 2009, and took on the role of Plant Manager on July 1, 2010. Mike is enthusiastic about the challenges of his new position and plans many improvements to the plant's safety, operational, quality, and environmental programs. He is also working to improve the Plant's donation policy.

When it comes to giving back to the community, Mike Kralik is promoting a hands-on approach. The Bath Plant has an extensive, long standing program that provides financial support to local community groups. Donation requests from groups and individuals are welcome throughout the year. A donation form is available on the plant's website, www.bathcementplant.com, which asks what the donation is for and how it will benefit the community or the individual. Mike would like to see hands on opportunities for plant employees to get involved.

"When you can see the results of your efforts you get a better sense of satisfaction and the sense that you've really helped someone," Mike explains. "As important as it is to support these causes financially, you can't always see who you've been helping. That's why we give priority to causes that plant employees and their families are involved with. It helps us to engage more meaningfully with our neighbours in the local community."

Kralik favours projects that "help people who need a boost to get to the next level," such as house repairs for families in need or sponsoring sports teams for tournaments. The plant's support of the Bath Revitalization project

and sponsorship of the Canada Day parade in Bath are other tangible ways that the plant helps the community.

Outside of work Kralik coaches basketball for the Kingston Impact Club. The father of four girls is originally from Central Kansas and has been at the Bath Plant for two years. He started out as Operations Manager before being promoted to Plant Manager.

Kralik and his family have settled in West Kingston and one of the best parts of his day is his drive to the plant each morning. "It's a pleasure to drive in along Lake Ontario and enjoy the views," he says.

A chemist by training, Kralik admits he is "a rarity" being surrounded by colleagues with engineering degrees. He graduated from Emporia State University in Emporia, Kansas and spent nine years at Lafarge's Sugar Creek Plant in Kansas City, Missouri. At the Sugar Creek Plant, he started out as an Engineer in Training and moved up to Production Coordinator and then Production Manager.

Kralik says his main goal is to make the plant more sustainable through improved operations and controlled costs, while ensuring that employee safety and environmental performance is at the highest level.

"We have a good group at the plant and the way to achieve our goals is through working together with greater expectations and accountability," he says. "When we work together well, it makes the time at work more productive and enjoyable."

"When you can see the results of your efforts you get a better sense of satisfaction and the sense that you've really helped someone."



(above) Lafarge reaches out to the community in last year's Canada Day Parade.



“Lafarge is a great company to work for and I enjoy my work quite a bit. There’s always a challenge, either in process or production. Never a dull moment!”

Employee Spotlight: Eric Boucher

In this issue we shine the employee spotlight on Eric Boucher. Eric is our Production Manager, and before joining the Bath Plant team, he gained valuable technical experience in Europe and the United States.

Where did you grow up and go to university?

I grew up in Timmins and Sudbury and went to the University of Ottawa. I got a B.Sc. in Biochemistry, a B.A.Sc. in Chemical Engineering with a minor in Business and then I achieved my designation as a Professional Engineer.

Where did you work before you joined Lafarge?

I was with Essroc for five years, starting at their Picton Plant. Before joining Lafarge I was Essroc’s Process Engineer for new plant construction in Martinsburg, West Virginia. I also gained overseas experience, working in France for three months then another three months with Essroc Italcementi in Italy. This international experience helped prepare me for my current role as I was exposed to many of the different technologies used to produce cement.

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How long have you been at the Lafarge Bath Plant and what is your current role?

I have been at the Bath Plant for two years. I started as the Production Coordinator and was promoted to Production Manager in July 2010. In this position I oversee all production aspects of the plant from forecasting what we need to produce, budgeting and handling day to day operations.

How did your international experience influence you?

From a technical aspect, it helped prepare me for my current job. At the Bath Plant I have been heavily involved in the biomass development work, which is part of the Cement 2020 project, and am helping develop other new products for the Bath Plant. I have worked on several new and exciting products for introduction to the Ontario market.

What do you enjoy about working at the Bath Plant?

Lafarge is a great company to work for and I enjoy my work quite a bit. There’s always a challenge, either in process or production. Never a dull moment!

What do you do outside of work?

I enjoy hockey and golf and spending time with my wife, son and daughter. With two children under 5 years old, there’s never a dull moment at home either!

Permeable Concrete: a concrete solution for water management

2011 is the year of water in Lafarge's Global Partnership with World Wildlife Fund International. In the spirit of this partnership, we'd like to introduce you to one of the many innovative concrete products that can help to protect our water reserves: permeable concrete. This tough, durable product has many advantages, including reduced storm water runoff and helping to maintain groundwater quality and quantity.

What is permeable concrete?

Permeable concrete is an innovation in paving technology that allows rain water to flow through paved surfaces. Like all concrete products, permeable concrete is made with Portland cement, which is produced at the Bath plant.

Traditional, impermeable concrete is made with a mixture of Portland cement, sand, aggregate and water. By changing the size ratio of the gravel used, permeable concrete sets with large empty spaces between the aggregate, allowing rainwater to pass through the pavement.

Uses of permeable concrete

Permeable concrete can be used anywhere that traditional pavement exists: parking areas, driveways, sidewalks, city streets and floors.

Benefits of Permeable Concrete

When rain falls on permeable concrete, the water is able to pass through.



(above) Permeable concrete is an innovation in paving technology that allows rain water to flow through paved surfaces.

Permeable concrete can be used anywhere that traditional pavement exists: parking areas, driveways, sidewalks, city streets and floors.

This improved drainage eliminates the need for storm water management structures, such as catch basins, manholes and sumps, leading to substantial savings for municipalities and builders both in new construction projects, and their subsequent maintenance.

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There are other substantial environmental benefits to this product. Traditional concrete and asphalt surfaces trap water, and while it is ponded, the water attracts chemical pollutants, such as oils and pesticides. As it gets warmer, bacterial growth increases. During a storm, large volumes of runoff are discharged very quickly, causing erosion and increased sedimentation, often overloading municipal storm water management systems.

When permeable concrete is used, water passes through, so natural temperatures are maintained, reducing water quality issues, such as Biological Oxygen Demand. Erosion and sedimentation are less of a problem, since there are no high volume runoff events.

A less obvious benefit relates to groundwater recharge. Run-off water from paved surfaces is directed to storm water systems, which drain rain water to rivers and lakes preventing this water from recharging underground water supplies. This is particularly concerning in highly urbanized areas like cities.

How does permeable concrete hold up in cold weather?

Despite the increased water retention capacity of pervious concrete, studies of past projects in the United States have shown no signs of freeze thaw damage. As well, there is less need for snow ploughing and black ice is rare because of better drainage.

To learn more visit the Portland Cement Association at www.cement.org and search for 'pervious concrete'.



(above) By changing the size ratio of the gravel used, permeable concrete sets with large empty spaces between the aggregate, allowing rainwater to pass through the pavement.



Introducing Cement 2020

Cement 2020 is an international research effort to reduce the carbon footprint in cement production by 2020. It is a unique approach bringing together a team of experts to study one cement plant, Lafarge's Bath plant, and brainstorm ideas to make the plant as sustainable as possible.

Why is it important to make the cement industry more sustainable?

Concrete is everywhere. It is used more than all other building materials combined and is necessary to build and maintain society's infrastructure. The cement sector is estimated to represent five per cent of the world's CO₂ emissions. To put this into context, Canada represents two per cent of the global CO₂ emissions. The industry must do its part to move toward a low carbon future. Lafarge hopes to make a significant positive improvement to Canada's sustainability.

What are the goals of Cement 2020?

This project is driven by three long-term visions. The first is the development of cleaner, low carbon fuels, such as biomass, to fully replace coal and other fossil fuels used in the cement industry. Another vision is energy optimization and the integration of cement production with fuel processing. The third and final vision relates to the replacement of imported fuels with local, renewable fuels.

Lafarge hopes to make a significant positive improvement to Canada's sustainability.

What is biomass?

Biomass is a clean, carbon neutral fuel found in local sources, such as leftover bark from lumber mills, construction debris, or non food crops like switch grass and hemp. In using biomass as a fuel, materials with little or no value,

like corn husks or forestry by-products, are turned into something of value to society: cleaner energy.

What are the benefits of using biomass to replace coal?

The benefits are lower CO₂ emissions, use of local fuels, a reduced environmental footprint and sustainability in action. In the fall of 2010 the Bath Plant conducted a biomass fuel demonstration. Results are being analyzed and will be published in June 2011.

Who is involved in Cement 2020?

The project is led by Lafarge North America with support from the Asia Pacific Partnership through the Government of Canada and Natural Resources Canada. A scientific review team will make practical recommendations to reach Cement 2020's goal. The team consists of experts from Queen's University, Royal Military College, World Wildlife Fund Canada, the Ontario environment ministry's Climate Change Branch and the Bath Plant's Community Liaison Committee. An international component includes representatives from France, United States, India, Australia, and China.

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Can the community provide input on Cement 2020?

Yes! The Bath Plant is seeking information from industry, municipalities, small businesses, farmers, and individuals about your ability to supply cleaner fuels. We look forward to hearing from all types and sizes of suppliers. To obtain project documents or to monitor progress, visit www.cement2020.com or follow us on Twitter.



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In our next issue of the Concrete Connection

Look for a special edition containing the biomass results and the Roadmap Report from Cement 2020

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Lafarge North America, Bath Plant is committed to being an environmentally responsible organization.

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