

Lafarge Bath Plant

concrete connection

In this issue

**An Important
Message to Our
Neighbours from
the Plant Manager...**

**Lafarge Bath Plant
Sponsors Women's
Hockey...**

**Employee Spotlight:
Brenda MacPhee,
the Quality Control
Co-ordinator at
the Bath Plant...**

**Part I: Cement
Quality and Why
it Matters...**



bringing materials to *life*

An Important Message to Our Neighbours

As many of you may be aware, a tragic and devastating accident occurred on August 27th at the Bath Cement plant. Since then our employees have been grieving the loss of William Wilson, a cherished member of our work family.

In the days immediately after the accident, we wore black ribbons as a sign of respect. The President of our region and the President of Cement for Lafarge in North America visited the plant shortly after the incident to offer the condolences of the

greater Lafarge family during this difficult time.

Today our focus continues to be on the family left behind. Our thoughts and prayers are with them. While comforting words are appropriate, we also wanted to go a step farther.

In response to an outpouring of concern by our employees here in Bath and across North America, as well as a number of our contractor partners, we have established a trust fund for

William's family. The Lafarge Bath Plant is matching individual donations and it is our hope that this financial support will provide at least some help to the Wilson family in the coming months.

We know that healing will take time, and hope this gesture will in some small way help this family feel the community's support.

Sincerely,

Michael Klenk, Plant Manager

Bath Plant Sponsors Women's Hockey

Over the November 7th weekend, the U-18 Women's Canadian Hockey Championship was held in Napanee, Ontario. The Bath plant was very pleased to become a Premier Sponsor, the highest level of sponsorship, for this exciting chance to see tomorrow's Team Canada stars. This event included a special appearance by Rocky, the Lafarge mascot, accompanied by Rob Cumming from the Bath plant and Chris Galway from the Lafarge Aggregates & Concrete Land Group.

After Rocky dropped the puck, the Ontario Blue team and the Atlantic team played an exciting and fast paced game in front of full stands of school children - who were given Ontario and Atlantic team flags to cheer the players.

These women, a few as young as 14, are the best in Canada, and the best of them will represent Canada at home in the upcoming Winter Olympics to be held in Vancouver in 2010.

The Bath Plant is proud to support Canadian Women's Hockey. The pursuit of excellence through teamwork is an idea that we have built our future on.

As one of the world's 100 most sustainable companies, Lafarge thrives in a competitive marketplace. It was in this spirit that we wished them a safe, thrilling, and highly competitive tournament.

A special thank you to Anthony DiCerbo, from the Lafarge A&C Land Group, for being Rocky and helping to make this a fun event.

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(above) Anthony DiCerbo of the A&C Land Group, also known as Rocky, the Lafarge mascot, drops the puck in a ceremonial face-off to start a game



“I enjoy the problem solving aspect of the job. When results aren’t where we want them, I like to work with the sample to try and figure out why it’s not performing to spec.”

Employee Spotlight

As a new regular feature in our newsletter, we will be highlighting one employee in each issue. In this issue we are hearing from Brenda MacPhee, the Quality Control Co-ordinator at the Bath Plant. Brenda grew up in Stewiacke, Nova Scotia, and attended Dalhousie University in Halifax, where she graduated with a B.Sc, majoring in Biology.

Q: How long have you been with Lafarge?

A: Just over 5 years but it’s been a very busy and exciting 5 years!

After graduating from Dalhousie in 2003, I started as a Night Sampler in the Brookfield Plant in Nova Scotia, a short 15-minute drive away from my family home in Stewiacke. Stewiacke’s claim to fame, by the way, is that it is halfway between the equator and the North Pole.

Soon after my start at Brookfield, I became a Quality Technician and then in 2004 I was asked to join a new Information Technology project team which launched the Quality Information Management System (QIMS). I was responsible for QIMS in five plants, including Bath and Kamloops which turned out to presage my future career very well.

When the QIMS Project was finished I became the Quality Co-ordinator at Brookfield. At this time I also enrolled in the Cement Professionals program, which is a training program offered by Lafarge for the development of young professionals.

In 2007 I moved to the Kamloops, BC Plant, on the other side of Canada, where I was the Quality and Environment Supervisor. During this time I also supervised quarry operations for 6 months. The quarry at Kamloops was a challenge to manage because within a few meters you could go from 2% silica to 45%.

In June of this year I came to the Bath Plant as Quality Co-ordinator.

Q: What interests you most about working in the Quality Department?

A: I enjoy the problem solving aspect of the job. When results aren’t where we want them, I like to work with the sample to try and figure out why it’s not performing to spec.

That was one of the things I enjoyed about managing the quarry in Kamloops, it was like a constant puzzle that needed solving. When my supervisor first told me I would be in charge of the quarry, I actually laughed at him; I didn’t think he was serious. After a few weeks though, I started to love the challenge. It’s probably my favourite thing I’ve done for Lafarge - so far!

Q: What new challenges do you face for the coming year?

A: I’m very excited to be part of a team, rather than being on my own. This coming year our team hopes to increase our recycled content in our cement and to re-use as much waste cement kiln dust as possible.

“I’m very excited to be part of a team.”

Cement Quality and Why it Matters, Part I



(above) Lafarge's cement was used to build the Confederation Bridge the world's longest bridge over ice-covered water .

Cement is the glue that holds concrete together and concrete is literally the foundation of our society. Concrete is everywhere, so much so that we don't notice it even though there is more concrete used than all other building materials combined. It supports our skyscrapers, schools, and hospitals, it makes it possible to span rivers, it provides us water, and it keeps us safe during storms. That's why cement quality matters.

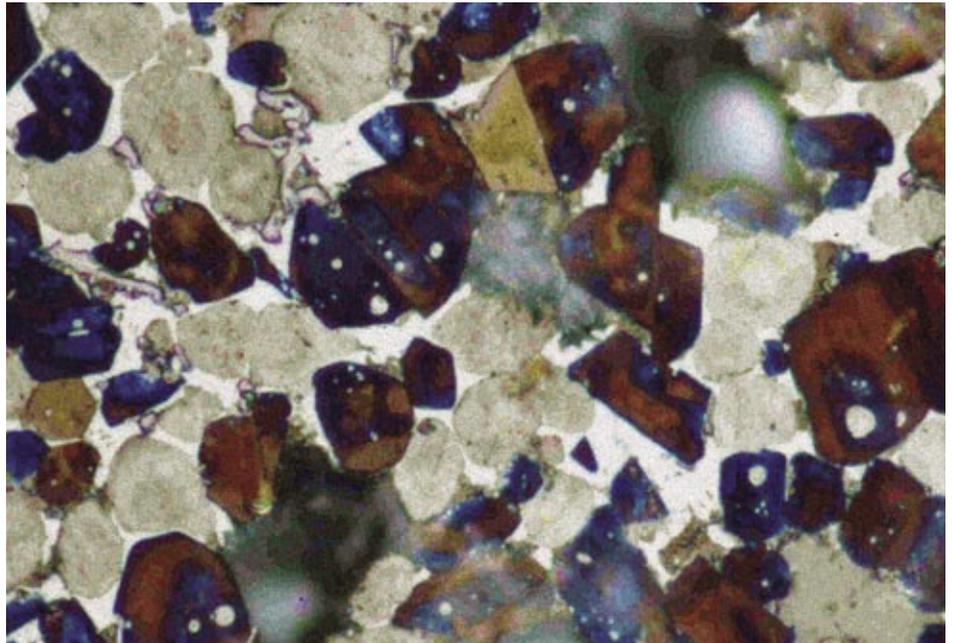
Concrete users such as concrete pipe makers, builders, and civil contractors all depend on the quality of the cement they receive from the Bath plant - and they need it to look and perform the same way every time. Architects don't want wall surfaces to have different shades of grey.

A crucial component in cement quality is consistency. Other important properties are set time and strength. Today, we'll focus on consistency.

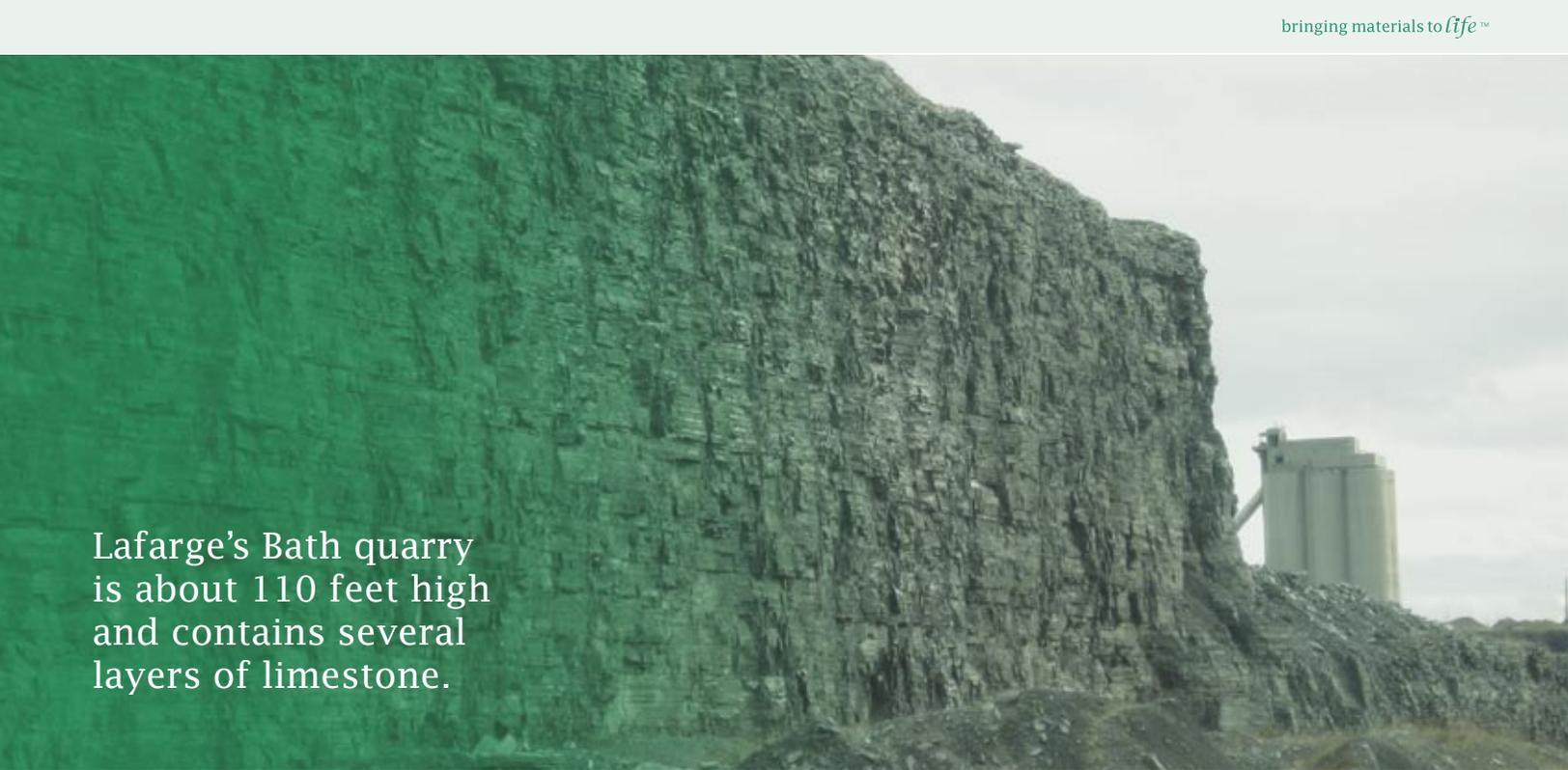
By design, cement production facilities are created with consistency in mind. It's no small challenge to mix 1,600,000,000 kg of rock and sand every year into a uniform "raw mix".

A fulsome view of quality includes environmental performance, personnel safety, raw material selection, equipment selection, design arrangement, levels of automation, and employee training. The end result of quality thinking is a facility that is capable of producing a consistent product.

Part of modern quality control is regular analysis of raw materials such as crushed limestone rocks, sand, and other feed stocks - ultimately forming the finished product - to ensure compliance with Lafarge and Agency standards. This effort begins in the quarry.



Microscopy is an important tool to assist the Quality Department in assessing results. Samples are taken around the clock to ensure quality targets are met.



Lafarge's Bath quarry is about 110 feet high and contains several layers of limestone.

We design our engineered blasts to create a uniform and blended mix of rock from the various rock types in our quarry.

Because of our program, the feed stock mix being fed to the kiln is the same from hour to hour.

Lafarge's Marketing Department has a program to collect and test competitor samples to see how we compare in concrete. In the case of cement consistency, the Bath plant currently has the most consistent strength uniformity among all North American Lafarge plants!

In Canada, Lafarge's products are certified to meet CSA standards - CSA stands for the Canadian Standards Association. This is the same CSA as the CSA logo on consumer products from appliances to sports equipment.

Did you know that concrete is actually hydrating, not drying, as it hardens? The added water ends up as part of the concrete. That's why it's possible to pour concrete under water.

Cement products have their own CSA division - the standard setting committee includes representatives from manufacturing, construction, industry, government and academia who collectively review and maintain the CSA standard for Portland cements.

The CSA standard is reviewed every 5 years. It can be found by visiting www.shopCSA.ca and searching for A3000. Because of the CSA, customers can purchase cement knowing that there are standards which must be met in order to call the product Portland cement.

For the do-it-yourselfers, you can buy a bag of Portland cement along with some sand and gravel and after adding water and mixing all of the ingredients you can make concrete for a variety of uses. You can also buy a bag of "ready mix" which only requires the addition of water.

Depending on your level of familiarity with concrete, you may be satisfied that it hardens and does what you need it to do. In contrast, civil engineers and architects depend on accurate, reliable, and "on spec" performance specifications when they design a building or a bridge.

Concrete users such as concrete pipe makers, builders, and civil contractors all depend on the quality of the cement they receive from the Bath plant - and they need it to look and perform the same way every time.

There's more to creating a quality concrete than quality cement. While cement is the glue, the fineness of sand and gravel, the quality and quantity of water used, and even the length of mixing time can all affect the final result.

Consistency is crucial.

For more information you can visit the Portland Cement Association at www.cement.org.



Meteorology at the Bath Plant

Since 2004, the Meteorological Tower, located to the west of the Bath Plant, has been continuously transmitting weather data to the plant. The station contains instrumentation to measure temperature, humidity, atmospheric pressure, total rainfall, wind speed and direction and total solar irradiation.

This information can be used as a diagnostic tool for noise, dust and other complaints. For example, windspeed can have a direct effect on blasting effects felt by the community.

Temperature, Humidity and Precipitation

Temperature and humidity are measured by electronic probes. These probes are kept inside a louvered enclosure which deflects direct wind, while allowing overall airflow, to ensure accurate readings. The enclosure is white, to avoid an inflated temperature reading due to absorption of solar radiation.

Precipitation is measured by a rain collector with an internal tipping valve. A tipping valve consists of two small containers with the same capacity.

Meteorological information, including temperature, humidity, atmospheric pressure, rainfall, and wind speed and direction and total solar irradiation can be used as a diagnostic tool for noise, dust and other complaints.

When the first container fills, the weight of the water causes the valve to tip, so that the second container is being filled. Total rainfall is determined by recording the number of times the valve tips.

Wind Speed and Direction

Wind speed and direction readings are taken at three different elevations, 10, 20 and 30 m. From this data, a windrose is constructed and resultant vector is found.

Wind data has many applications. For example, the signal sent to the plant from the wind sensors is directly linked to the Solid Fuel Waterspray system for fugitive dust suppression.

If at any time high winds are recorded, the sprinklers are automatically triggered, to avoid dust generation. This data has also been used in preliminary studies to determine the suitability of the site for windmill placement, and once five full years of data have been collected, it can be used for noise and fugitive dust modeling.

Total Solar Irradiation

Solar irradiation is measured by an instrument called a pyranometer. The pyranometer consists of a thermopile sensor protected by a glass dome. The thermopile converts radiation to heat which flows to the pyranometer casing, where a voltage, proportional to the solar radiation is generated.

The glass dome cuts off the part of the spectrum above 2800nm, which consists largely of reflected radiation, while preserving the 180 degree field of view.

At this time, Lafarge is using the data generated by this instrument for preliminary studies on the use of solar panels at the Bath Plant, and how they will be affected by the dusty environment around the plant.

Supporting Local Athletes as They Go for the Gold

If Andy Van Grunsven has his way, the Lafarge logo will be sitting on the medal podium in British Columbia next winter.

Andy has been working hard to earn a chance to represent Canada at next year's Paralympic Games. As of this January, he was the second-ranked sit skier in the country, despite having less mobility than most of his competitors.

Five years ago, Andy was injured in an ATV accident near his home just north of Bath and became a C-7 quadriplegic, meaning he's lost mobility in all of his limbs. He decided to take up sit skiing, despite the fact that his competitors are mainly paraplegics, with full or near-full use of their arms.

In addition to the time and travel it takes to train for the Paralympics, Andy has had to overcome some financial obstacles in his quest for gold. A sit ski costs upwards of \$1,000, and he needs one for each of the four events he competes in.



Andy's journey toward his Olympic dream faced another obstacle this winter when he fell during training and fractured a vertebra but he still has his sights set on Vancouver 2010

Fortunately, he's had some help along the way. In addition to his family and friends, Lafarge has been one of his most loyal supporters. For each of the last two years, Lafarge has donated \$2,500 to help cover his expenses. And in return, Andy has worn the company logo on his helmet and his sit ski.

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Andy's journey toward his Olympic dream faced another obstacle this winter when he fell during training and fractured a vertebra. While he'll have to rest up for the remainder of the winter, Andy still has his sights set on Vancouver 2010, partly because of all of the support he's received.

"Lafarge has been very good to me," he says. "I don't want to let them down."



Concrete is everywhere, so much so that we don't notice it even though we use more concrete than all other building materials combined.

In our next issue of the Concrete Connection

We hope you've enjoyed the premier issue of the new Concrete Connection. Here are a few of the stories you can look forward to in our next issue, due out in the spring:

Staff Profile: David Yokom

We'll take you up close and personal with the site supervisor of our West quarry Development.

West quarry Project

We've got the inside scoop on our \$12-million dollar quarry relocation project and what it means for you.

How to reach us with comments and/or feedback?

To reach us by mail, please write to Bath Plant, Lafarge North America, P. O. Box 160, Bath, Ontario, K0H 1G0 or email lafargebathinfo@lafarge-na.com

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

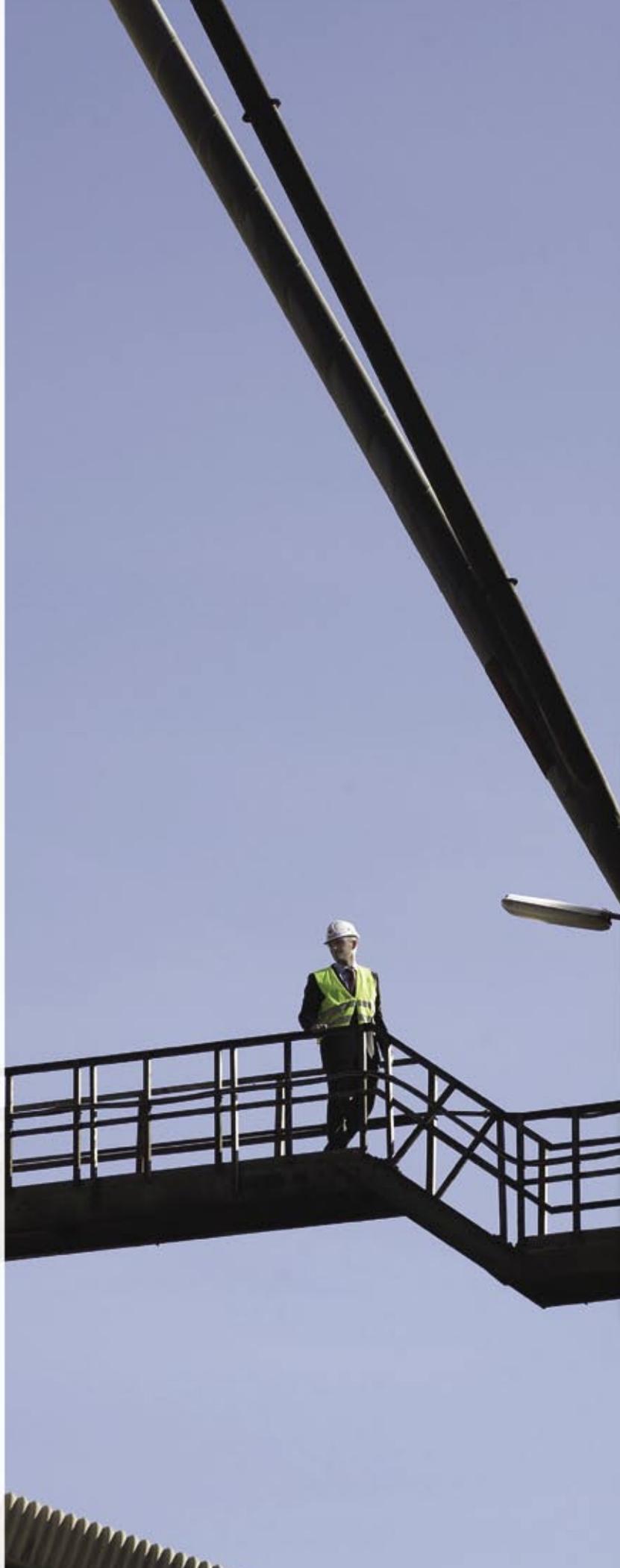
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