

READY MIX NEWS

A SUPPLEMENT TO THE ATLANTIC CONSTRUCTION & TRANSPORTATION JOURNAL



Atlantic Concrete Association
Association béton Atlantique

Ready Mix Briefs

- Our deepest condolences to family, friends and colleagues of William Gerald "Bill" Cole, 54 of Porter's Lake. Bill, who passed away June 10th, 2009, founded and built "Perma-concrete" into a multinational franchise corporation.
- There has been increasing interest in using Pervious Concrete for various paving applications in the region. For this reason there is a demand by clients for trained Pervious Concrete installers and so our association is in the process of bringing up the certification course developed by NRMCA. Gordon Leaman, Colin Dickson, Steven Peters, and Kevin Nickerson will serve on the new Pervious Concrete Atlantic Certification Committee. Watch for a certification course to be offered by ACA in Spring 2010. Email info@atlantic-concrete.ca for more information.
- The Cement Association of Canada will be offering its Concrete: Basic Principles and Practice course again in Spring 2010 in Moncton. Email cdickson@cement.ca for more information.
- The first drivers who received their Concrete Delivery Professional Certification in 2005 will need to recertify in 2010. ACA will be offering recertification courses in the Spring. Email info@atlanticconcrete.ca for more information.
- s/s-tech - the International Solidification/Stabilization Technology Forum will be held in Sydney Nova Scotia June 15th to 17th, 2010. Two days of peer-reviewed technical papers from experts in the field of S/S and a third day of presentations by the Sydney Tar Ponds Project team and a site tour of the largest S/S project in Canada. More information can be found at www.sstechcapebreton.com.



The Trillium project on South Park Street is one of the largest residential building projects in downtown Halifax's recent history. See the story on page 4.

FREDERICTON CONVENTION CENTRE UPDATE

Work is "progressing well" on the Fredericton East End Development Project (FEED)—the largest municipal capital project in New Brunswick history.

ADI International Project Manager Don Smal said Nov. 17 that "the Conference Centre structure is up and we will be starting to enclose the building this month."

The engineer told Ready Mix News that three floors of the Office Tower superstructure had been poured and they were working on the fourth.

Smal said that half the foundations for the 450-car Parking Garage had been completed "and the precast superstructure has been fabricated."

He did note that, "Excavation for the Parking Garage has been challenging due to ground water and an adjacent structure."

ACA'S ENVIRONMENTAL AWARDS

By ANDY WALKER

The Atlantic Concrete Association's environmental recognition awards are designed as a pat on the back for producer member companies that have adopted day-to-day business practices that lessen their environmental footprint.

"It's not really designed as a competition so much as a way of saying 'good job'", says Regional Manager Kevin Nickerson, who also chairs the ACA's environment committee. "Hopefully it will also act as an example to other companies to inspire them to examine and improve their environmental practices."

Nickerson and his company are leading by exam-

ple. Quality Concrete Ltd. reduced the size of its wash down waterlines at each of its plants to increase pressure while minimizing volume. Its plants have all been outfitted with the 'Recover' system.

'Recover' is a hydration stabilizer that eliminates the need to dump wash water. The wash water can be held in a truck overnight and used as batch water the following day.

"Any waste concrete is returned to the plant and poured into 'barrier block' forms," Nickerson explains. "Any concrete in excess of the capabilities of the forms is dumped to harden then hauled for crushing then used as fill material."

Continued on page 2

Correction – FEED project

The article "Concrete Forming Basis of Largest Municipal Capital project in NB History," which appeared in the Ready Mix News Spring 2009 edition, contained the following inaccuracies:

- the entire project will use approximately 30,000 m³, with about 10,000 m³ in place by mid May (not 50,000 as stated).

- there are 2 architectural firms - ADI Limited and Cannon Design (not ConDesign).
 - the parking garage expert on the project is Reid Jones Christoffersen (not Reed-Prescott).
 - the provincial government plans to occupy the entire 17,000 m² of the building (not 13,500 m²).
- We apologize for any confusion these errors may have caused.

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ACA'S ENVIRONMENTAL RECOGNITION AWARDS FOR READY MIX CONCRETE PRODUCERS

Continued from page 1

He says the Dartmouth facility recently switched its boilers to low emission natural gas burners that run much cleaner and much more efficiently.

This year's ACA environmental recognition awards were presented to: Osco's Glenholme Ready Mix, Ocean Contractors, Lafarge Canada and Quality Concrete Ltd.

Glenholme Ready Mix Plant Manager, Shawn Putnam, says they test all property runoff water as well as a neighbouring brook twice yearly. He notes the frequent monitoring is designed to catch any problems quickly.

"We do a complete test for everything including hydrocarbons, pH and petroleum."

In addition, the company washes all their mixers in a closed loop water system at their wash plant. Putnam explains the system raises the pH level in the closed loop and this helps reduce the amount of flocculent needed at the plant for settling. It also helps increase the pH of the topsoil that is added to the waste washout.

"It is nice to receive the recognition," Putnam says.

"Lessening our environmental footprint is a major priority for our company."

In 2007, Ocean Contractors installed the proprietary ENVIRO-PORT at its Halifax plant. Scott Flemming, V.P., explains that the system enables the recovery of process water and storm water in a completed closed loop configuration.

"Residual water is then metered back to the batch plant for reuse by weight batch metering system.

"We can divert 100 per cent of our water



This year's ACA environmental recognition awards were presented to Osco's Glenholme Ready Mix, Ocean Contractors, Lafarge Canada and Quality Concrete Ltd. In the photo Glenholme Ready Mix Plant Manager Shawn Putnam (left) accepts his award from ACA Past President Gerard Gaudet.

run-off from the Halifax Regional Municipality storm water collection system."

Flemming says the company's Dartmouth plant has a full concrete reclamation system enabling filtration of process water and returned concrete mass. Fine and coarse aggregates are separated and stored for re-use in the ready-mix process.

Alex Kennedy of Lafarge Canada said his

company has developed a water management policy that ensures all of the water is recycled through a closed loop system. "We try to recycle water back into the concrete at a given percentage."

Kennedy says measures are being taken to keep the dust down during the mixing process. Mixing is not done on windy days and regular maintenance ensures the storage silos operate

at peak efficiency.

"We train all our staff on the steps we are taking to lessen our environmental footprint. We also conduct an internal environmental audit each year."

Kennedy says the award is both a pat on the back for those companies recognized, as well as an incentive for other companies to look at improving their own environmental practices.

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Ron Collins, CET AMEC NL Technical Coordinator
on his appointment as

ACI Atlantic Chapter President 2009

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STIMULUS SPENDING HELPING ATLANTIC CONSTRUCTION INDUSTRY

By ANDY WALKER

An unprecedented level of infrastructure spending is helping the construction sector—including the ready mix concrete industry—weather the global economic downturn.

"We have never seen this level of public spending before," says Michael Atkinson, the president of the Canadian Construction Association.

Nationally, the federal government has committed to \$12 billion in new infrastructure in 2009 and 2010. That is in addition to the previously announced \$33 billion infrastructure plan slated between now and 2014.

Atkinson says his Association keeps a running tally on infrastructure spending in all of the provinces and territories. As of the end of October, there were 40 projects valued at \$231.2 million (a federal contribution of \$90.1 million) in New Brunswick.

Newfoundland and Labrador has checked in with 22 projects already under way for a total value of \$139.2 million and \$51.5 million from the national treasury.

Nova Scotia has seen the biggest impact so far with 106 projects valued at \$221.4 million and a federal contribution of \$104.4 million.

Prince Edward Island has 18 projects at the shovel ready stage with \$34.3 million and \$16 million in federal dollars.

Major projects in New Brunswick include:

\$100 million in highway upgrades; a \$61.2 million upgrade to the Port of Belledune; a \$18.5 million YMCA facility in Fredericton creating 100 construction jobs; the \$31.2 million Tower Road project in Moncton; the \$26.6 million clean-up of Saint John Harbour; \$9 million to upgrade the southern railway, and \$6.2 million for the Charlotte County Civic Centre in St Stephen.

In Newfoundland and Labrador, the projects include: \$45 million in Trans-Canada Highway improvements; \$22.5 million for Team Gushue highway extension from Kenmout Road to Goulds; \$12.3 for St John's Petty Harbour water treatment, and \$11.6 for St John's Bay Bull pond water treatment.

In Nova Scotia, the major projects include: \$30 million for the first phase of the Antigonish bypass and \$25 million for the second phase; \$10 million for the Lunenburg County Lifestyle

Centre in Bridgewater; a \$12 million mainland common centre in Halifax; an \$18 million regional library in the Nova Scotia capital; a \$7.2 million upgrade to the Bluenose; a \$9.5 million upgrade for dock repairs to the Marine Atlantic terminal in North Sydney, and \$6.75 million on upgrades to Highway 101 from Kingston to Coldbrook.

In PEI the list includes: \$3.75 million for the first phase of the completion of a perimeter highway that would allow motorists to bypass Charlottetown; \$3.25 million for the second phase (when completed the project will have additional turning lanes, a large culvert to improve drainage and a berm to reduce noise to the adjacent neighbourhood); \$2.1 million for traffic enhancements to University Avenue in the capital city; \$1.5 million for enhancements to Gateway Village in Borden-Carleton; a \$1.3 million indoor soccer facility in Charlottetown,

and \$4.5 million for the second phase of the Summerside wind farm.

In almost all cases, the Infrastructure Stimulus Fund money flows through agreements with provinces and territories. They in turn sign agreements for the transfer of funds with municipalities. (Unless the province or territory is notified otherwise) once the projects are announced under the Infrastructure Stimulus Fund, all federal approvals and environmental assessments are complete and project work can begin immediately.

While many of the projects would have gone ahead in the future, Atkinson says the Infrastructure Stimulus Fund program has created one of the most active construction seasons the country has ever seen. He says it will pay dividends for all segments of the construction industry including the ready-mix concrete association

Ready Mix Briefs

- A reminder for members to notify ACA if there are any changes needed to update their web directory listing on our website, www.atlanticconcrete.ca. The website is kept current and gets about 2000 hits a day. Our web stats show that most site visitors head straight for the directory and then jump right onto one of our member company's home websites. Email info@atlanticconcrete.ca for more information.
- Registering for the Las Vegas World of Concrete February 2 to 5th 2010? Be sure to do so by using the link on the Canadian Ready Mix Concrete Association's (CRMCA) website www.crmca.ca. CRMCA gets a small commission for Registrations channelled through their site.
- ACA now has truck decals available for members. They are \$6.00 each. Follow this link to order yours <http://www.aprmca.com/webmedia/archive/company/TruckDecalOrderForm.pdf>



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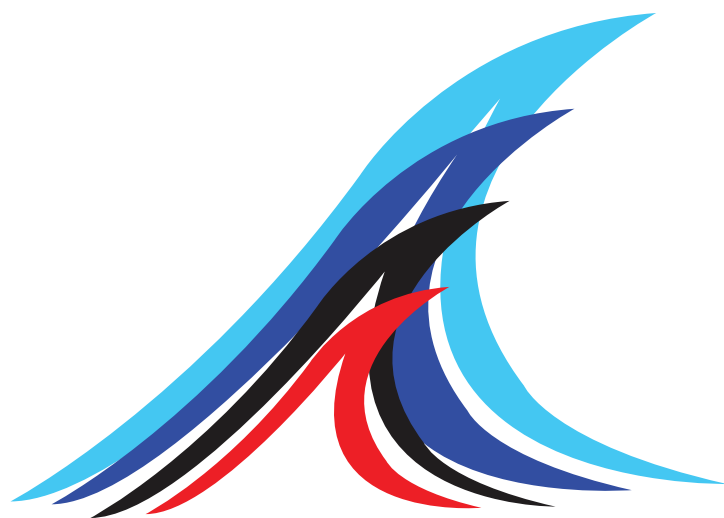


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CONCRETE INDUSTRY SUPPORTS HABITAT FOR HUMANITY

By ANDY WALKER

Concrete suppliers throughout the Atlantic region have been more than willing to help out chapters of Habitat for Humanity.

"Habitat Fredericton considers itself fortunate to have many "build" supporters in the area," says Mike Ross. "As you can imagine a foundation is not something that could be done in a variety of stages with multiple suppliers. The size of the homes we build really need a single pour as it were."

The chair of the board for Habitat for Humanity Fredericton adds, "Knowing we can count on the industry to come to the table in such a generous fashion like A&P Concrete and Wilsons Foundations have been able to do is huge. He says not every company can participate every year, but "if in turn they all help out over time the burden is shared and the much needed homes get built."

Tim Ryan of Habitat for Humanity Saint John says Strescon has been a major partner and have donated concrete for each of its 13 builds. "It is just a wonderful gift and we ap-

preciate it so much."

The Habitat for Humanity Chapter in the Halifax Regional Municipality receives a discounted rate from Osco's Bedford Ready Mix for its concrete needs. Group spokesman Shona Chaisson says, "It is a really big help in keeping our cost down."

She notes that the Bedford plant was again involved in the group's latest project on the Herring Cove Road that was completed in late November.

On Prince Edward Island, Executive Director Susan Zambonin says they receive discounts from two concrete suppliers—Schurman's (for projects in the Summerside area) and CRM Ready Mix (for projects in the Charlottetown region and in Queens County).

"We are extremely grateful for their support," Zambonin says.

The office manager for Cabot Habitat in Newfoundland and Labrador notes that her group also relies on a number of concrete suppliers throughout the region. But at press time, Andrea O'Neill, Office Manager for Cabot Habitat did not have the list of suppliers on hand.



Ocean Contractors will use close to 15,000 cubic yards of concrete for the Trillium project, an 84-unit condo on South Park Street in Halifax, Nova Scotia.

LARGE POUR FOR TRILLIUM PROJECT HINTS THAT THE ECONOMY IS TURNING A CORNER

By ANDY WALKER

For Ocean Contractors, the Trillium project is proving to be one of the largest residential building projects in recent memory.

The 84-unit condo project on South Park Street in Halifax, Nova Scotia will use close to 15,000 cubic yards of concrete. Scott Fleming, vice president of Ocean Contractors' concrete division, says the company has already done two large pours at the site.

"We had a pour of 1,500 cubic yards in one day and we pretty much had our total fleet on the site. Usually those kinds of numbers are associated with an industrial or commercial project—you don't usually see it on a residential site."

Fleming notes there was another day when the company poured almost 1,300 cubic yards. Given the current economic climate, he believes the project shows "tremendous faith" in the future of the Halifax area and should be taken as an indication "we are turning the corner."

Before concrete could be poured, the pit

had to be cleaned with compressors in order to remove the silt and loose rock. A mud slab was poured over one half of the pit bottom to allow a smooth surface for the rebar company to install their rebar.

The Trillium project has 19 levels in total, with the first level serving as storefront commercial units. The second level is dedicated to professional offices; residential units begin on the third floor, and there's a penthouse on the 19th floor.

Standard features of the building include 24-hour concierge service; 24-hour video display security; a furnished meeting room; guest suite; fitness room; heated ramp to underground parking; indoor carwash bay and a generator back-up.

WM Fares Group is the prime consultant for the project. The urban Design consultants are Duffus Romans Kunzins Rounsefell Architects. Pinto Engineering Ltd. is the structural engineer; Burnside Consulting Engineering has the mechanical contract; Electect Engineering Ltd. is the electrical contractor and SDMM is handling the civil and land surveying.

CONCRETE AN IMPORTANT COMPONENT OF LEED PROGRAM

By ANDY WALKER

Concrete is seen as one of the most "green" building materials making it a point-getter under the Leadership in Energy and Environmental Design (LEED) program.

LEED is a voluntary program that rates new buildings in five categories: sustainable sites; water efficiency; energy and atmosphere; materials and resources and indoor environmental quality. Each category is broken down into a number of credits—points are earned for following LEED guidelines—a minimum of 26 points are needed for certification and there are silver, gold and platinum certification levels.

"Concrete by nature is a regional product," says Keith Robertson of Solterre Designs. "The source is usually nearby and that cuts down the transportation costs and it is a credit."

His Halifax, Nova Scotia company has been LEED consultant on a number of major projects in the Maritimes. He said even though the certification is voluntary "there is now much more emphasis being put on it when planning projects."

Cement can be used to solidify and stabilize contaminated soils and reduce leaching concen-

trations to below regulatory levels. With documentation, that will earn one LEED point. Putting a concrete garage on the lower floors of a building means additional land is not diverted for parking and that also results in one point.

Another point can be gained by using pervious concrete for parking and driveways to reduce the rate and quantity of storm water runoff. Properly designed pervious concrete installations enable increased infiltration of storm water because the concrete mix contains coarse aggregate, little or no fine aggregate, and insufficient cement paste to fill the voids between the coarse aggregate.

Robertson says on building sites where the existing imperviousness is greater than 50%, the LEED credit requires the rate and quantity of storm water runoff be reduced by 25%. On building sites where the existing imperviousness is less than 50%, it specifies that the post-development discharge rate and quantity from the site must not exceed the pre-development rate and quantity.

Portland cement concrete is also LEED friendly as it reduces both the "heat Island" effect on paved surfaces and the need for air conditioning. As the temperature of urban areas increases, so does the probability of smog and pollution. Port-

land cement concrete generally has a reflectance of approximately 0.35, although it can vary.

Buildings constructed of cast-in-place, tilt-up, and insulating concrete forms (ICF) possess thermal mass that helps moderate indoor temperature extremes and reduces peak heating and cooling loads. Robertson explained that thermal mass can make a significant contribution to energy savings; this is demonstrated when mass is incorporated into an energy consumption simulation program.

Concrete can also result in a building reuse credit as it has a long life. Credits are available if a portion of the building can be left in place when it is renovated. Credits are available for diverting construction, demolition, and land clearing waste from landfill disposal. As concrete is a relatively heavy construction material and is frequently crushed and recycled into aggregate for road bases or construction fill, it is eligible for the credit.

Supplementary cementitious materials (SCMs), such as fly ash, silica fume, and slag cement, are considered post-industrial materials. A concrete building with 25% of its Portland cement replaced with fly ash should be able to achieve one LEED point. A concrete building with 40% replacement of Portland cement with fly ash should be able to achieve two points.

Robertson says concrete is an important component to the success of the program. The potential available points that can be earned through its use range from 13 to 23.

More information about LEED credits available from using ready mixed concrete can be found in the "LEED Reference Guide. Ready Mixed Concrete Industry, Updated Third Edition with LEED 2009 Information" at <http://www.rmc-foundation.org/images/RMCREP%20LEED%20Guid%20Revised%2010-09.pdf>

CANADIAN STANDARDS ASSOCIATION TO ISSUE CSA Z151 SAFETY STANDARD FOR CONCRETE PUMPS AND PLACING BOOMS

The first edition of CSA Z151, Concrete pumps and placing booms provides requirements for the design, manufacture, installation, operation, inspection, testing, and maintenance of concrete pumps, placing booms and delivery systems. This standard was prepared in response to an increased number of incidents, resulting from equipment failures and power line contacts, involving truck-mounted concrete pumps. It is intended to facilitate a consistent level of safety for those who work in and around concrete pumps.

Existing standards, regulations and other documentation for concrete pumps were extensively reviewed in the preparation of this standard. This standard is presented in 3 Parts:

Part 1: Design, construction, installation and

markings;

Part 2: Inspection, testing and maintenance; and

Part 3: Operation.

CSA Z151 was prepared by the Technical Committee on Truck-Mounted Concrete Pumps, and will be submitted to the Standards Council of Canada for approval as a National Standard of Canada. The development of the standard incorporated parts of the American Concrete Pumping Association's Safety Manual.

The responsibilities of the owner and operator for inspection and maintenance of the equipment as well as the qualifications of the operators are defined.

CSA Z151 will soon be available for purchase on-line at www.csa.ca in either hardcopy or electronic file format.

NEW CONCRETE STANDARDS FROM CSA

The 11th edition of CSA Standard A23.1, Concrete materials and methods of concrete construction, and A23.2, Test methods and standard practices for concrete, was published in August 2009. A balanced volunteer committee of 31 voting and 24 associate members that represented Producer, User, General, and Regulatory-Interest members edited this standard.

The A23.1 standard, published in one volume, included the following major changes:

- 1- Portland-Limestone Cements (PLC) were included, as per CSA Standard A3000-08,
 - 2- Mineral fillers were introduced (with limitations) and a new Annex L describes their use,
 - 3- Requirements for Interior Floor Slabs were clarified in a new section,
 - 4- Annex N on Pervious Concrete was added,
 - 5- Annex M on Sustainable Development, Construction and Concrete was added, and
 - 6-Annex J guidance on the alternatives for specifying and ordering concrete was expanded.
- Many of the test methods found in A23.2 were edited and updated to include precision and bias statements, and five test methods were added:

- 1- Temperature of freshly mixed concrete,
- 2- Total water content of normal weight fresh concrete,
- 3- Slump flow of concrete,

- 4- Passing ability of self consolidating concrete by the J-Ring, and
- 5- Length change of hardened concrete.

The test methods for evaluating alkali aggregate reactivity (AAR) were also edited.

The requirements for housing and small buildings, formerly covered in CSA Standard A438 that has since been withdrawn, are now covered in a section of this edition of the A23.1 standard.

The CSA standards are considered living documents and undergo revision and editing on a five-year cycle. Work has already begun on the 12th edition of the standard and test methods for publication in 2014. The changes in the documents reflect industry changes, the results of ongoing research, and improvements in test methods.

Committee members from Atlantic Canada include Melvin Fiander, Quality Concrete, Dartmouth; Wilbert Langley, W.S. Langley Materials and Concrete Technology, Lower Sackville; Gordon Leaman, Stantec Consulting, Dartmouth; Fred Strang, NB Department of Transportation, Fredericton; and Michael Thomas, University of New Brunswick, Fredericton.

CSA A23.1 and A23.2 are published in one volume and available for purchase from Canadian Standards Association at www.csa.ca in hardcopy or electronic format.



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CONCRETE OR ASPHALT? NEW SOFTWARE HELPS DECISION-MAKERS

By ANDY WALKER

CanPav is becoming an important tool to convince municipalities and contractors about the cost advantages of concrete for road construction.

Users of the program which will soon be posted to the site, www.canpav.com, can create a number of possible scenarios for their projects and compare the initial construction costs of both concrete and asphalt paving materials.

Tim Smith of the Cement Association of Canada says the free software is gaining popularity throughout the industry.

CANPav™ offers complete control over both the concrete and asphalt cross-sections and the construction cost inputs that will be used to build municipal streets or commercial parking lot estimates. Smith says the software offers users the ability to quickly compare the initial construction costs of the two paving materials.

The comparisons can be saved for future use. Smith says the system has default cost values built in for all ten provinces and can be operated in either English or French.

The software allows the user to input both the materials and cost inputs and then generates a cost comparison for both asphalt and concrete pavement.

Initially developed for the Ready Mix Concrete Association of Ontario, the software does not include detailed design or estimating options. However, it does allow the user to change design or material costs after the project has begun.

Asphalt has traditionally been seen as a cheaper option compared to concrete. The software proves that conviction is no longer valid. One reason is the increase in the cost of bitumen used in asphalt. (A new refining process has driven up the price of bitumen because it is also used in other products like gasoline and fuel oil.)

Concrete has always been seen as less expensive over a 50-year life cycle, but Smith says the software demonstrates that it can be the best short-term economic option as well.

Driving on the smoother concrete pavement has also been demonstrated to save vehicle fuel and reduce lighting expense at night since concrete has a much more reflective surface than asphalt.

ADMIXTURES—THE NEXT GENERATION

By STEVEN PETERS
Euclid Admixtures Canada

Like any other material supplier in the industry the Admixture sector is developing every day. Some admixtures gain momentum more so than others but research goes on to find and refine these products. Admixtures help the industry in a wide variety of ways; from stabilizing the quality of Entrained Air to combating shrinkage, to producing fluid or dry concrete, high performance concrete and permeable concrete. Some Admixtures are available in powder form to assist in the manufacturing of dry shotcrete powder mixes and bagged goods for patch and repair.

Euclid Admixtures Canada can provide corrosion inhibitors (Calcium Nitrate) to help protect rebar and Lithium Admixture to help combat alkali silica reaction (ASR). Coloured pigment in powder and liquid form are also available to integrally colour concrete. Macro fiber (structural fiber) can be added to replace wire mesh, some rebar detail and to help reduce plastic shrinkage. These are not to be confused with micro fiber that only helps in reducing plastic shrinkage and has no structural value for replacement of mesh or rebar.

Structural fiber (macro fiber) in construction has evolved for more than "value added" reasons. Structural fibres make for a more safety friendly worksite by helping to reduce trip hazards and, in most cases, to increase speed of placement. These are now commonly used in the Tilt-Up buildings we see around Atlantic Canada. Another growth area has been the Polycarboxylate technology and rapidly progressed to

high solids (40%+) and extended slump life for superplasticizers. Every Admixture company has an arsenal of Polycarboxylate superplasticizers due to the need to accommodate compatibility issues with cement powders and aggregates in each region. A small change in aggregate gradation, mixing time in the ready mix truck and speed of mixing can rapidly affect the quality of concrete being produced.

Now the next evolution of shrinkage reducing Admixtures is here. New to the market from Euclid Canada is a powdered shrinkage compensating admixture. CONEX allows for a one component shrinkage reduction and shrinkage compensating product. It allows for shrinkage reduction in concrete without affecting the air content, set time or other properties of fresh concrete. CONEX does not affect the mechanical strength of the hardened concrete and passes salt scaling tests and freeze-thaw tests. The expansion process of CONEX is not through ettringite formation, although we do have a surface tension type Admixture, Eucon SRA/SRA+, that uses the ettringite technology. The new Admixture (CONEX) appears to be superior in reducing shrinkage without the usual effects on entrained air.

Owners, Contractors, Architects, Engineers, Public Works (DOT with HPC) and "Green" building designs are demanding that admixture technology continues to evolve. Concrete construction is no longer just a slab, wall or bridge. The flexibility of concrete structures has enabled it to become a showcase. Admixture suppliers are always looking for ways to help make it easier to produce concrete mixes that are economical and value added for both the end user, and the ready mix producer.

A SAFE WORKPLACE

By the Atlantic Concrete Association
(ACA) Safety Committee

Safety First... Safety is no accident... A Safety Culture... Think Safety... are all phrases that you have heard before. All of these and many more, I am sure, you will hear again. Why so much emphasis on trying to teach something that should be rudimentary in a job function? Why do so many people get injured or worse every day in the workplace? Here are just a few reasons:

1) Lack of a safety culture. A "Nobody really cares" or a "What's in it for me?" attitude.

How can we address this problem? Some things that can be done in the workplace are:

- Create a program that encourages co-workers to ensure each other's safety with recognition awards or certificates.
- Reward safety milestones.
- Or simply buy a round of large double doubles and donuts for your crew once in a while just to discuss any near misses that may have happened, but nobody wanted to "officially report" for fear of getting into trouble. An open discussion amongst peers is a great opportunity to get suggestions about how to improve safety in a non-threatening way.

2) Sometimes it may be a lack of training. This is where valuable organizations within our region can help. There are many not-for-profit organizations focused specifically on the construction industry like the NBCSA, NSCSA, NLCSA and others who can help. There is also a litany of private safety consultants that can help you design a safety program for your staff based on specific conditions of your work-

place.

3) Sometimes the problem is inattention. Place simple reminders in the workplace about hazards. These can be placed in pay envelopes, on safety boards, at main entrances or on brightly colored posters in your workplace. There may also be room for "toolbox" meetings just to keep up with changing worksite conditions. All are simple reminders to work safely.

4) Inappropriate equipment or tools can result in accidents. So often it is the case of someone using a tool or piece of equipment that should not be used, but, "Oh it's just this once" or "I thought it would be OK if I was careful". An active safety committee can do regular workplace inspections. They can identify possible hazards and find correct methods to get the job done. This also creates involvement among co-workers and builds on the foundation of Safety.

The ACA Safety Committee is working on some ideas to keep you informed and to encourage safety in our industry. Please watch for upcoming e-mails with safety tips and bulletins. We encourage anyone with an idea to contact us through the Association so that we can pass it on to others. There is also a terrific safety section for our drivers included in ACA's Concrete Delivery Professional Certification program.


You may have also seen a request form for submittals for the 2009 Safety Awards to be handed out in February at Con-Atlantic in St. John's, NL. Please take a few minutes to fill it out and send it in.

See you in St. John's!

(Your ACA Safety Committee is: Keith Johnston, Doug Murrin, Allan Heffell, Alex Kennedy and Paul Miller)

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RESEARCH UNDERWAY ON CEMENT KILN DUSTS' POTENTIAL TO TREAT ACID ROCK DRAINAGE

By ANDY WALKER

Research on using cement kiln dust to treat waste is now in place at Dalhousie University in Halifax, Nova Scotia.

MASc candidate Allison Mackie is conducting the research under the watchful eyes of Civil & Resource Engineering Assistant Professor Dr. Margaret Walsh and Associate Professor Dr. Craig Lake.

Cement kiln dust (CKD) is a fine-grained material that is captured in the kiln's air pollution control devices. Most cement plants return the majority of their captured CKD to the head of the plant. However, due to cement quality issues, not all CKD can be reused in this way. The main disposal option for CKD is in on-site or off-site landfills.

There are currently several reuse options for CKD, including solidification/stabilization of wastes and pasteurization of municipal sewage sludge.

The calcium oxide (CaO) content of

CKD makes its potential for reuse in treating acidic mine wastewater or acid rock drainage (ARD) promising. Previous studies involving CKD have found that this material can contain from 8.1 to 61.3 % (by weight) of CaO—the main ingredient of quicklime. Lime precipitation processes are the most widely used treatment option for acidic, heavy metal-laden mine wastewater.

Dr. Walsh says the overall objective of Mackie's project is to investigate at bench-scale the viability of using CKD as a lime replacement for the treatment of acidic mine effluent. Samples of CKD have been collected from six cement plants in Canada and the United States. The samples have been characterized for their physical and chemical properties in both solid and liquid phases and evaluated for acid neutralization potential compared to conventional chemical treatment (i.e., quicklime).

A series of bench-scale treatability experiments to compare the performance of CKD to the addition of standard quicklime

are currently being conducted using acidic mine effluent in a standard jar test apparatus.

It is anticipated that the results of the study will provide new information in the area of wastewater treatment through precipitation processes. Current treatment systems may also be applicable to other acidic and/or heavy metal-laden wastewaters.

Results of the acid neutralization and metal precipitation trials Mackie conducted in the spring/summer 2009 have demonstrated that even CKD samples with low free lime contents could be effective at neutralizing acidic mine effluent wastewaters.

Dr. Walsh says these results suggest that CKD could be ideal for replacing or augmenting commercial quicklime use in the wastewater treatment industry.

The Portland Cement Association & Canadian Cement Association (PCA/CAC) is providing funding for the project.



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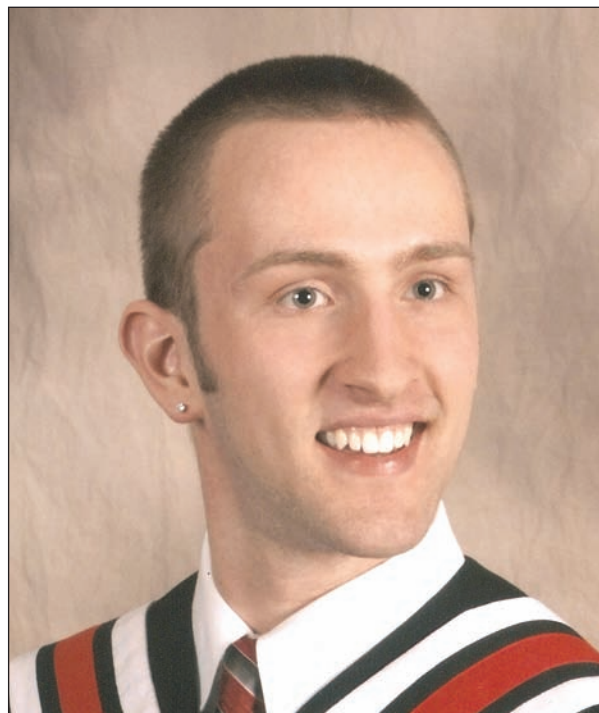
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Jessica Hiltz



Justin Grainger

HILTZ, GRAINGER RECEIVE '09 ACA MEMORIAL SCHOLARSHIPS

There was an excellent slate of candidates for this year's Atlantic Concrete Association Memorial Scholarships and it was difficult for the selection committee to select the two winners for the two \$1000 scholarships. Our congratulations and best wishes go out to Jessica Hiltz from Milford Station, Nova Scotia and Justin Grainger of St. John's, Newfoundland & Labrador.

Jessica is an actress, writer, musician, athlete and student leader who was on her school's track and field team and plays basketball and soccer. She was very active in school politics and was school President in her final year. Jessica was also in the school band and helped organize the prom and graduation. She had an important role in the school musical and also wrote for and edited her school newspaper.

Jessica found time after school to be heavily involved in her community. She belonged to the soccer association, was involved in her community theatre, helped with local tourism, was a curator at the local museum and volunteered on the Re-

lief Committee for victims of Hurricane Katrina.

Jessica submitted an excellent essay about Concrete entitled "A Structure Worth Mixing". She was sponsored by Bedford Ready Mix and is now enrolled at Dalhousie University taking a Bachelor of Science in Biology.

Justin is another all round high achiever; an athlete and musician who plays basketball, volleyball, rugby, baseball, softball, soccer, table tennis, curling and was also on the track and field team for his school. He was a member of the provincial basketball team and the Canada Games Rugby team and sung in his school's chamber choir.

Justin also helped his community by volunteering for Easter Seals and Breast Cancer fundraising events. Justin's teachers say he is a natural leader in a wide variety of endeavors including sports, music and academics.

Justin submitted an excellent essay on Concrete and was sponsored by Jacques Whitford Stantec Limited. He is now at Memorial University studying Business.

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ACA ASSOCIATE MEMBER LOCATIONS YTD 2009

NOVA SCOTIA (52)		NEWFOUNDLAND & LABRADOR (11)		QUEBEC (10)		ONTARIO (6)		ALBERTA (1)		PRINCE EDWARD ISLAND (3)		USA (2)	
Aberdeen Paving Limited	03	Scalco & Food Equipment (Balance Equipment Culinaire)	01	Action Machineries Inc. (Div. London Machinery Inc.)		BASF, The Chemical Company - Admixture Division		Cementec Industries Inc.	08	Charlottetown/Bunbury	C.R.M. Ready Mix Limited	NS	52
ADI Limited		Separation Technologies Inc., LLC / ProAsh®		Assn of Canadian Industries Recycling Coal Ash	03	Cement Association of Canada		Cementec Industries Inc.	08	Charlottetown	Schurman Concrete Limited	NB	28
Aggregate Equipment (Atlantic) Limited	07	Holcim Canada Inc.		BMH Systems Inc.		London Machinery Ltd.		Command Alkon	07	Montague/Victoria Cross	MacLean's Ready Mix Concrete	NL	11
Albany Cartage Co. Ltd.		Stanhope Simpson Insurance Ltd.		Euclid Admixtures Canada Inc.		Grace Canada Inc.		Separation Technologies Inc., LLC / ProAsh®	04	Souris	MacLean's Ready Mix Concrete	PE	3
All Weigh Systems Inc.		TrueFoam Limited		Gerquip Inc.	04	MPAQ Automation Inc.	02	Command Alkon	07	Springfield West	Quality Concrete Springfield West	QC	10
AMEC Earth & Environmental Ltd.		Wallace Equipment Ltd.		Grace Canada Inc.		Propex Concrete Systems	09			Summerside	C.R.M. Summerside	ON	6
Aon Reed Stenhouse Inc.	07			Holcim Canada Inc.						Summerside	Schurman Concrete Limited	USA	2
Arrow Construction Products				Lafarge Canada Inc.								Total	112
Atlantic Tractors & Equipment Ltd.				Lafarge Canada Inc.								Numbers in Columns C & G, i.e. 99, 01, 08, indicate new members in that year.	
Bird-Stairs Ltd.				Road King Technologies Inc.	09							Total of 80 Associates with over 100 locations in Atlantic Canada	
Cement Association of Canada				Weigh-Tronix Canada ULC								H indicates Honourary Life Membership with APRMCA	
Commercial Safety College	06											* indicates Reciprocal Membership with APRMCA	
Construction Association of Nova Scotia												01 indicates new members in 2001	
Credifax Atlantic Limited	99											02 indicates new members in 2002	
Dora Construction Limited	04											03 indicates new members in 2003	
Euclid Admixtures Canada												04 indicates new members in 2004	
GCR Tire Services												05 indicates new members in 2005	
Gallant Aggregates Ltd.												06 indicates new members in 2006	
Grace Canada Inc.												07 indicates new members in 2007	
Holcim Canada Inc.													
Hydraulic Systems Limited	07												
Imperial Oil	00												
Jelco Contracting Inc.	09												
J.W. Lindsay Enterprises Limited	02												
Jacques Whitford Stantec Limited													
Landscape NS Horticultural Trades Association	03												
Lafarge Canada Inc.													
Langley Concrete & Materials Technology Inc.	H 01												
Lockhart Truck Center	04												
Maritime Fence	08												
Maritime Testing (1985) Limited	03												
Norman F. MacLeod, P. Eng.	H 03												
MacKay's (Volvo) Truck & Trailer Center Limited	00												
Merit Contractors Association of Nova Scotia	02												
Nova Scotia Home Builders' Assoc.	*												
Nova Scotia Power Inc.													
Parts for Trucks Inc.													
Pinnacle Agencies Ltd.													
Rideau Construction Inc.	05												
S.W. Weeks Construction Ltd.													
Rideau Construction Inc.													
RST Industries													
Shaw Resources													
Stanhope Simpson Insurance Ltd.													
Top Construction Limited	01												
Trimac Transportation Services, L.P.													
Truckers Association of Nova Scotia	*												
TrueFoam Limited													
Urquhart-MacDonald & Associates													
Wallace Equipment Ltd.													
Weigh-Tronix Canada ULC													
Wilcraft Concrete Services Ltd.													
Zep Manufacturing Company of Canada	99												
NEW BRUNSWICK (28)													
ADI Limited	03												
All Weigh Systems Inc.													
Arrow Construction Products													
Atlantic Underground Services													
Bird-Stairs Ltd.													
Cement Cartage Co. Ltd.													
Conquest Engineering Ltd.	03												
Cement & Concrete Studies Ltd.	03												
Construction Association of New Brunswick	*												
Jacques Whitford Stantec Limited													
Lafarge Canada Inc.													
MacLeod General Construction Ltd.	02												
Modern Enterprises Ltd.													
New Brunswick Home Builders Association	04												
New Brunswick Merit Contractors Association Inc.	02												
New Brunswick Power	04												
Ormac Industrial Supply Inc.	04												
Parts for Trucks													
Pinnacle Agencies/Degussa/Master Builders													
R.E. & J.E. Friars Ltd., a Division of RST Industries													
Rideau Construction Inc.													
Road Builders & Heavy Construction Association of New Brunswick	*												

MEMBER PLANTS & LOCATIONS YTD 2009

NOVA SCOTIA		NEWFOUNDLAND		PRINCE EDWARD ISLAND		NEW BRUNSWICK	
Aberdeen	Quality Concrete Aberdeen	Bay Roberts	Dawe's Concrete Products Ltd.	Charlottetown/Bunbury	C.R.M. Ready Mix Limited	Belledune	Blanchard Ready Mix Limited
Amherst	Casey Concrete Limited	Corner Brook	Atlantic Ready Mix Limited	Charlottetown	94 Schurman Concrete Limited	Bloomfield	05 Midway Concrete Ltd.
Antigonish	Casey Concrete Limited	Dunville, P. Bay/Argentia	97 Argentia Ready Mix Limited	Montague/Victoria Cross	MacLean's Ready Mix Concrete	Campbellton/Tidehead	Béton Brunswick Ltée.
Antigonish	Quality Concrete Antigonish	Forteau	97 C & T Enterprises Ltd.	Souris	** MacLean's Ready Mix Concrete	Cap Pelé	Casey Concrete Limited
Auld's Cove	Quality Concrete Auld's Cove	Foxtrap, Conception Bay South	Mac-Mix Concrete Ltd.	Springfield West	** Quality Concrete Springfield West	Darlington	Béton Brunswick Ltée.
Bedford	08 Casey -Metro	Goose Bay	Labrador Construction Ltd.	Summerside	C.R.M. Summerside	Dunlop/Bathurst	92 Blanchard Ready Mix Limited
Bedford	OSCO - Bedford RM	Goose Bay	05 RSM Municipal Inc.	Summerside	Schurman Concrete Limited	Edmundston/St. Jacques	Béton Brunswick Ltée.
Bedford	Quality Concrete	Grand Falls/Windsor	92 Hunt's Concrete Supplies Ltd.			Florenceville	New Concrete Products Ltd.
Bridgetown	V.J. Rice Concrete Limited	Grand Falls/Windsor	Penney Ready Mix			Fredericton	Econocrete Ready Mix Ltd.
Bridgewater	97 Bridgewater Ready Mix (1966)	Marystown	97 Peninsula Ready Mix			Fredericton	Lafarge
Bridgewater	South Shore Ready Mix Ltd.	Marystown	98 Cluett's Constr. & Ready Mix Ltd.			Fredericton/Noonan	02 Mira Construction Ltd.
Chester	South Shore Ready Mix Ltd.	Pasadena	05 Johnson's Construction Ltd.			Fredericton	94 Northside Ready Mix Ltd.
Church Point/Concession	93 Spectacle Lake Conc. & Excav. Ltd.	Northwest Brook/Clareville	93 Fortis Concrete Inc.			Grand-Anse	02 Chaleur Ready-Mix Ltée.
Dartmouth	Ocean Contractors	Spaniard's Bay	94 Murrinco Ready Mix			Grand Falls	Béton Brunswick Ltée.
Dartmouth	Quality Concrete	Stephenville	92 Bay St. George Ready Mix			Lamègue	92 Lamègue Ready Mix Ltée.
Elmsdale	** Mobile Ready Mix Ltd. (Quality)	Stephenville	09 Whalens Concrete			Miramichi	Lafarge
Glenholme	93 OSCO - Glenholme RM	St. John's	03 Cabot Ready Mix Limited			Miramichi	Newcastle Ready Mix Limited
Halifax	Ocean Contractors	St. John's	Capital Ready Mix Limited			Moncton	Casey Concrete Limited
Halifax	Quality Concrete Limited	St. John's	Concrete Products 2001 Limited			Moncton	Lafarge
Kentville	Quality Concrete Kentville	St. John's	09 Hutchings Concrete			Moncton	Quality Concrete Moncton
Kentville	V.J. Rice Concrete Limited	St. Paul's				Moncton	Strescon Limited
Lower Sackville	OSCO - Sackville RM					Nackawic	New Concrete Products Ltd.
Milford	Casey Concrete Limited					Oromocto	Lafarge
Mt. Thom	Ideal Concrete (portable)					Quispamsis	06 Valley Concrete Inc.
New Glasgow/Trenton	Casey Concrete Limited					Rexton	Warren Ready Mix Limited
New Glasgow/Trenton	94 Keltic Concrete Ltd.					Saint John	** Béton Brunswick Ltée.
Point Tupper	Ideal Concrete Ltd.						
Sheet Harbour/Watts Section	** Tri-Star Concrete Services Limited						
Shelburne	Harlow Construction Ltd.						
Springhill	Lafarge						
Sydney	Municipal Ready Mix Limited						
Sydney	Quality Concrete Sydney						
Truro	Casey Concrete Limited						
Truro	Lafarge						
Wallace	99 Rte. 6 Ready Mix Ltd.						
Whycocomagh	Ideal Concrete Ltd.						
Windsor	OSCO - Annapolis Valley RM						
Yarmouth	Lafarge						

Listing Index

92 - indicates new members in 1992 = 5
 93 - indicates new members in 1993 = 7
 94 - indicates new members in 1994 = 4
 95 - indicates new members in 1995 = 3
 96 - indicates new members in 1996 = 4
 97 - indicates new members in 1997 = 5
 98 - indicates new members in 1998 = 2
 99 - indicates new members in 1999 = 1
 00 - indicates new members in 2000 = 5
 01 - indicates new members in 2001 = 2
 02 - indicates new members in 2002 = 3
 03 - indicates new members in 2003 = 2
 04 - indicates new members in 2004 = 1
 05 - indicates new members in 2005 = 4
 06 - indicates new members in 2006 = 1
 07 - indicates new members in 2007 = 0
 08 - indicates new members in 2008 = 2
 09 - indicates new members in 2009 = 1

** - plants noted with a double asterisk are owned by members but are not currently certified.

APRMCA PROVINCIAL BREAKDOWN

Location	Members	Plants	Non-Members	Plants	Associates	Communities with Members	Producers as Members (%)	Plants as Members (%)
NS	14	38	4	4	52	28	77.8	90.5
NB	17	37	7	7	28	28	70.8	84.1
PE	3	7	3	4	3	6	50.0	63.6
NL	19	19	8	9	11	16	70.3	67.9
AB					1			
ON					6			
QC					10			
USA					2			
TOTAL	53	101	22	24	113	78	70.6	80.8