



# CONTRACT

CHALK RIVER LABORATORIES • VOLUME 1 ISSUE 2 WINTER 2006

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## AECL shatters \$80K goal

corporate charity of choice.

Our staff have always been – and have once again proven themselves to be – proud supporters of charitable causes around the County. Their donations of time, money and materials have helped benefit countless causes in our communities. This year, as in years past, AECL and the Chalk River Labs chose to support United Way/Centraide as our

This year’s campaign ran from October 16 – 27, and raised a commendable \$84,000. Donations from employees at Chalk River were designated to one of two local campaigns: the Deep River and District United Way (which serves Chalk River, Deep River and areas to the north and west), or the United Way/Centraide of the Upper Ottawa Valley Inc. (which serves Pembroke, Petawawa, Renfrew, Arnprior and adjacent areas).

“This year was a critical one for the Upper Valley campaign as they have recently lost two major corporate contributors,” notes Donna Roach, Campaign Chairperson. “The community needed us to show support, and once again, staff at the Chalk River Labs have pulled through.”

## High school students: The future of nuclear

From November 16 -18, the Science Teachers Association of Ontario held their annual conference in Toronto. On hand was the Canadian Nuclear Society (CNS) with a message for science teachers: more emphasis on nuclear in the high school curriculum.

“I would like to see Geiger counters in every high school,” says CNS spokesperson Bryan White. “If science teachers are going to talk about medical isotopes in the classroom anyway, why not take it a step further. Tell students about all the great things nuclear

has to offer, and encourage them to get involved.”

Representing Women in Nuclear (WiN) was AECL’s Tracy Gagne, who spoke to teachers about the current growth and direction of the nuclear industry. “Nuclear offers something for everyone - engineering, trades, administration, radiation protection - says Gagne, who has worked as a nuclear operator for the past 16 years. “Women in particular should be made aware of the opportunities available to them.”





Welcome to the holiday edition of *Contact*. As 2006 comes to a close, it is a time to celebrate with family, friends, and neighbours. At AECL Chalk River we consider ourselves very fortunate to have a beautiful environment in which to work, with great communities and wonderful neighbours on all sides. We hope you feel the same about having the AECL Chalk River Laboratories in your community.

This has been a year of significant change and improvement for us at the Chalk River Laboratories. Several high-profile improvement milestones were achieved, including the extension to the National Research Universal (NRU) reactor operating licence, the approval of the decommissioning funding, and the 63-month site operating licence. We have also hired more than 200 new staff, and continue to improve our overall business performance.

In order to achieve our vision of world-class performance, we have identified key performance areas to enhance productivity and safety site-wide. A number of initiatives are underway to reduce the number of human performance errors on site. In the nuclear industry, these are typically referred to as Event Free Tools, and through their use we will improve in all areas of our operation.

We have exceeded my business improvement goals for this year, and are anxious to continue our improvements in 2007. We are working hard for all of our stakeholders, and greatly value our relationship with the communities and residents here in the 'Valley.

On a closing note, I hope you will join us in extending a special wish for the safety and well-being of all the extraordinary men and women of the Canadian Forces. To all of our community neighbours I wish you on behalf of all the staff at the Chalk River Laboratories, a safe and happy holiday season. We look forward to sharing more about our operations with you in 2007.

*B.E. (Brian) McGee*  
*Vice-President, Nuclear Laboratories*



### Engaging speaker: Sheena Lubitz

AECL's Sheena Lubitz is giving back to her community college by informing the next generation of Office Administration Executive Program students of the numerous career opportunities at Chalk River. A Pembroke native, and graduate of Algonquin College's Office Administration Executive program, she now feels a responsibility to talk about her experience as a co-op student at Chalk River, and about the work we do at the Laboratories. Her intention is to help current students understand how her education served as a cornerstone in her career development, and, how she applies her education in her current job of nuclear Materials Assistant.

"It's important that we be seen as an employer of choice, especially with the volume of manpower we will be needing over the next while," says Susan Sweet, Manager of HR. "We have seen the need for administrative people increase over the past few years, so if this trend continues it will be important to have skilled people available."



## AECL Hosts First Environmental Stewardship Council Meeting

AECL's Chalk River operations recently held its first Environmental Stewardship Council with nominated municipal officials, First Nations community representatives, interest groups and AECL staff coming out in full force.



The Council was formed by AECL to enhance communications with key stakeholders and representatives from the surrounding communities. Similar to utility-based community advisory groups, the Environmental Stewardship Council provides regular opportunities for face-to-face meetings that promote two-way dialogue on environmental issues and allows an exchange of ideas and opinions from a varied base of interested members of the public.

During the meetings, Council members are informed and updated on AECL activities that may have an impact on their communities. Council members are given an opportunity to voice their opinions to AECL management on these activities, and are kept apprised of the company's proposed actions on issues that are raised.

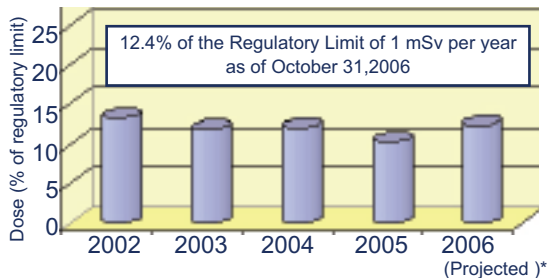
Led by professional facilitator John Vincett of PD Alternatives, the first meeting included an overview of AECL and its Chalk River operations, a presentation and discussion on waste management and decommissioning, a site tour and concluded with an open discussion about individual expectations of what the Council would like to achieve. Dan Gagné, Nuclear Facility Site Supervisor for the Canadian Nuclear Safety Commission's CRL site office, also attended as an observer.

### Environmental Report

As a certified ISO 14001:2004 Environmental

Management Systems organization, AECL is committed to studying and reducing the low impact of our operations on the environment. The estimated annual dose to those living within a 8-kilometre radius of CRL is equivalent to roughly 1/4 of the amount of radiation that you would receive during a medical x-ray (0.4 millisieverts or mSv), and is well-below the regulatory limit for the public set by the Canadian Nuclear Safety Commission (1 mSv/year). \*Actual figures for 2006 will be made available when all environmental data is collected and complete at the end of this year.

#### Dose from Radiological Air and Liquid Emissions



# PROJECTS & Accomplishments

## Spreading the good word about nuclear

Nuclear energy; amazing science or dangerous technology?

This was the question posed to a room full of enthusiastic high school students at the Canada Science and Technology Museum. On hand to respond was Alastair McIvor of the National Research Council's (NRC) Canadian Neutron Beam Centre, located at AECL's Chalk River Laboratories.

McIvor was invited to present his talk entitled *The Science and Psychology of Nuclear Power*. The presentation discussed the benefits of nuclear - including cost savings, zero greenhouse gas emissions, and the relatively small volume of waste.

He also applauded AECL's National Research Universal (NRU) reactor as being Canada's "largest, most productive science facility," explaining the many benefits that have come from the research being done at the Chalk River labs, including the development of the CANDU™ reactor which currently supplies more than 50 per cent of

Ontario's power supply, Nobel Prize-winning research, and the production of medical isotopes positively affecting the lives of over 21 million people every year.

### AECL Speakers Bureau

With nuclear re-emerging as a viable energy option, and with all the current uses of nuclear medicine, many of you may have questions you would like answered. We can help.

If you know of a community group - Girl Guide or Scout troop, science class, residents association or special interest club - that would welcome a guest speaker, don't hesitate to suggest the Speakers Bureau. The speakers are available at no charge, and any presentation or topic can be tailored to the specific needs of the group.

For more information or to request a speaker, contact AECL's Community Affairs department at 613 584-8283.

## Strainer Project: CRL Staff Deliver

One of Chalk River's most demanding projects has just wrapped up, thanks to a "herculean" effort on the part of our dedicated staff.

Nuclear regulators in many jurisdictions around the globe have made it mandatory for nuclear power plant operators to upgrade their Emergency Core Cooling (ECC) strainer capability to improve safety if an accident were to occur. In fact, the US Nuclear Regulatory Commission has directed the licensees of operating Pressurized Water Reactor (PWR) designs to have upgraded protective mechanisms in place by 2007.

Building on the strength of its extensive experience outfitting CANDU plants with new ECC strainers, AECL has won contracts to design, test and deliver ECC strainers for seven US power plants - the first of which was installed in October.

"In very simple terms, these strainers act as filters to collect debris that would be dislodged during a Loss of Coolant Accident (LOCA)," explains Christine Fahey, Senior Director, Nuclear Laboratories Business Unit (NLBU) Project Office. "By removing particles from cooling water flows, the strainers protect the pumps that re-circulate cooling water through the reactor core."



## You Asked Us...



Congratulations on AECL's first issue of *Contact*. I found it to be both informative and a 'good read'.

In the fifth paragraph of the article on FPS, there was no mention as to whether or not the materials extracted during the vacuum-drying process would be toxic in nature, or how AECL would handle their disposal. I believe this to be a matter of public concern and would welcome more information.

*M.L. Robinson,  
Laurentian Hills*

Dear Ms. Robinson:

Thanks for your positive reaction to *Contact*. The Fuel Packaging and Storage Project is a really interesting one and you've asked an excellent question.

The drying process will be done in stages: First, any air inside the vessel will be drawn off in a contained system. During this process, any radioactive particles that are present will be captured through two stages of HEPA filtration. The vessel will then be filled with helium gas, which is used in the drying process.

Once the operating temperature of around 75°C is reached, the vacuum pump will be started. The helium gas will be extracted, again through the two stages of HEPA filtration.

The non-radioactive filtered gases from steps one and two will be discharged to the atmosphere through a stack and continuously monitored against stringent environmental standards. Should any radioactivity be detected, the system will be immediately shut down stopping any further discharge.

The used HEPA filters will be monitored for pressure drop and radioactivity build-up. To reduce the exposure to workers

in the facility, the filters will be changed well before they reach the recommended maximum pressure drop and before any level of activity is reached that would make handling the filters difficult. The used filters will be stored in existing AECL waste storage facilities on the Chalk River property.

*Phyllis Heeney, Senior Project Engineer*

The design, testing, manufacturing, and installation of these strainers is a huge effort, and involves an extensive array of our professionals, including engineers, technicians, procurement specialists, machinists, sheet metal workers, pipe fitters and welders.

All of the people working on this project have been pushing hard to meet the customers' needs: NLBU has invested over 94,000 worker hours since the project began. "Add in the CANDU Services Business Unit contribution of 14,400 hours, and the true nature of what we're undertaking becomes visible," says Randy Lovelace, ECC Strainers Project Director. "I am extremely proud of the high



level of dedication I have been receiving across AECL, and also very proud of the quality product that our team is producing."

A key milestone was reached at 2:09 AM October 23, when the first of seven US strainers was installed, right on schedule.





## Canada's tallest Christmas tree in our backyard

For the 2nd year in a row, Logos Land Resort in Cobden hosted the "Canada's Tallest Christmas Tree." The 2006 tree is dedicated to the more than 3000 Canadian troops stationed abroad this Christmas, many of whom are local to base Petawawa. The lighting of the tree took place at 6 p.m. on December 9 and was broadcast live to CFB Kandahar, Afghanistan.

AECL contributed to the celebration by sponsoring the adjoining Christmas Forest. The 30-acre forest is lit with LED lights and has a train ride through displays such as "Christmas Around the World," in celebration of the Christmas season and cultural diversity.

The Christmas forest is expected to have more than 5,000 visitors, including the 3,000 children being bused in from all over Renfrew County to decorate the tree.



## Our firemen are fit

Congratulations to AECL's Firefit Team. CRL firefighters Dean Bourque, Lee Dennique, Scott Morphy and Mark Lalonde had a strong showing at the Scott Firefit National Championships September 17 - 21, which enabled them to compete to at the World Championships in November. Since then, Dean Bourque has been inducted to the Lion's Den, an elite group of Firefit competitors, who have attained an outstanding level of performance at the Scott Firefighter Combat Challenge.

## Closing Note

Remember, we want to hear from you and welcome any questions or comments you may have. Whether by phone, email, fax or snail-mail, we value your opinions, and hope you'll get in touch.

### Donna Roach

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