

New DCC fire protection expertise helps protect personnel

New fire protection engineering expertise is helping DCC personnel offer timely, effective fire and life safety support to DND projects—and to take advantage of that expertise, all you need to do is call.

Operating within the Realty Asset Support section of DCC's National Operations Group, two fire protection engineering technologists are now dedicated to fire protection and life safety. Last November, Pat Gallagher—who has been with DCC for the past two and a half years—was joined by Bill Fremis.

“When we’re at the design and review stage, we look at the same drawings and specifications as the other engineering disciplines, such as electrical or mechanical, except that we’re looking at them from a fire protection point of view, to ensure compliance with the National Building Code and with the specified design function,” Gallagher explains. He adds that they work with designers to make them aware of specific DND requirements that often exceed the building code.



Pat Gallagher (above) is one of two DCC fire protection engineering technologists dedicated to fire protection and life safety.

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“Once the building is actually under construction, we’ll go to the site to make sure that the construction is in accordance with those design plans and the specifications,” he continues.

But that’s not all—the team’s third area of responsibility lies in providing project management support to DCC site personnel and DND project managers. Gallagher explains that he and Fremis are available for fire protection assistance at any stage of a project.

“As the construction authority, it’s DCC’s responsibility to hand the building over as functionally complete,” he says. “Previously, the CF Fire Marshal’s office would come in at the end of the process, and if they found anything that needed to be corrected, it could hold up the

handover from DCC to DND. Now, DCC has an internal resource that supports the CFFM and reduces delays. If the DCC contract representative has a question, for example, they can come to us in house and we can help them out long before it becomes a problem.”

The aim, Gallagher says, is an efficient service for delivering the project to the client. “This is only one small component, but it can have an effect,” he says, adding that the work holds an additional, critical value.

“I want to make sure that the users of the building are safe and that they can get out quickly and safely if there’s an emergency,” he says. “Knowing that we’ve done that makes me feel better when I go to bed at night.”

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Work at 8 Wing/CFB Trenton in high gear

With \$1 billion worth of construction heading to 8 Wing/CFB Trenton in the next several years, the DCC site office is understandably pleased to see construction nearing completion on at least one major project.

Site Operations Manager Vern Haggerty reports that the finishing trades have moved into the Joint Nuclear Biological and Chemical Defence facility, with drywall and painting underway. In fact, commissioning has begun for the building, which is already 80 percent complete and on track to be done in June.

“We’re using the Ontario commissioning resource group from the regional office, as they’re certified commissioning agents,” notes Haggerty. “Mark Dawson has been working up here five days a week since February 1.”

He adds that due to DND’s Airlift Capability Program, worth about \$600 million, DCC has requested expressions of interest for the design of a \$90-million hangar expected to go to tender next fall, along with an \$18-million apron due for tender in March 2008 and a \$24-million north apron the following fiscal year.

To cope with the busy schedule, DCC has split the site office into two—one office handles the base program and the Canadian Forces Housing Agency, and the other manages the



The steel structure of a temporary hangar. The \$5.5 million project will be completed on June 18, 2008. The permanent hangar, to be completed in 2010, is currently in the design phase. It is estimated that it will cost more than \$90 million to build.

Airlift Capability Program and the NDHQ program. It may open a third office as the work continues to grow.

One advantage of the busy base is the opportunity for DCC personnel to move into different job families. “Ruth Dicks moved from the Environmental job family into the Business

and Site Management Services job family last spring, for example. And in January, Huffman Chun Ho So moved from the Construction Services job family into the Program and Project Management job family. With all the work here, it’s an excellent place to gain expertise and experience in a variety of roles,” says Haggerty.

12 Wing construction gets helping hand from Wing Commander—and goes green

A massive refit at CFB Shearwater is preparing the wing to welcome the new CH-148 Cyclone helicopters, scheduled to begin arriving in January 2009. The \$99-million, multi-phase refit is the largest contract DCC has ever awarded.

Last November 30, Colonel J.B. Ploughman—Wing Commander at 12 Wing Shearwater—laid the ceremonial first brick for one of the project’s new buildings, the 12 Wing Common Support Facility.

“When the owners of the building are able to lay that brick, they can come back later and see the brick and know that they were part of the project. It’s a tangible physical connection to the building and its users,” says Construction Program Manager Marc Brophy.

“The three major buildings have been contracted using a design-build approach, and



12 Wing Shearwater’s Common Support Facility, as of February 2008.

the contractor, Bird Construction, has put in a lot of effort at the beginning of the process to prepare the design drawings,” he notes. “But at the same time, the contractor has been able to get some of the physical work done as a parallel activity.”

The Common Support Facility required the most interior work of the three structures, so the contractor enclosed the building before winter arrived. “The steel structure is up, the roof is started, the building envelope is well underway, so the plumbers and electricians and interior partitioners are working for the winter,” Brophy says.

At the 12 Air Maintenance Squadron Facility, the foundation is complete and the structural steel is well underway. As soon as the steel crew is finished, they’ll move across to the 423 Maritime Helicopter Squadron Facility, which required an initial building teardown before construction could start.

“It was a 3-R demolition project,” says Brophy, adding that it involved removing a number of

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DEW Line clean-up achieves site investigation milestone

The 2007–2008 season marked the end of the site investigation phase for the Distant Early Warning (DEW) Line Clean-Up Project. “That’s a very significant milestone,” says Associate Project Manager Steve Poaps.

DND is responsible for the environmental clean-up of 21 former Arctic radar stations. To support the Department, DCC provides project and contract management through a dedicated project management office in Ottawa, guiding the clean-up through each of five phases: assessment, investigation, design, construction and monitoring. The construction phase, during which environmental remediation takes place, is already complete at 14 of the sites. With all of the site investigations and most of the design now finished, the remaining sites are moving forward into the construction phase, which involves tendering and then carrying out various clean-up activities. The monitoring phase, which includes site inspections, is underway at the 14 completed sites. The commitment is for 25 years of post-construction monitoring for each of the 21 sites, resulting in an overall forecast completion date of 2036.

“This project showcases how a DCC-staffed project management office seamlessly integrates all the DCC service lines—contracting, construction services, environmental services, real property support and program management—and thus enhances the overall service to DND,” says Poaps.

Depending on what the site investigations show, clean-up might involve excavating existing landfills, creating new engineered landfills, constructing and operating land farm facilities to remediate hydrocarbon-containing soils, demolishing buildings, containerizing debris, and dealing with any materials requiring special handling.

“We’re taking the land to an environmentally safe condition,” says Stewart Dafoe, Manager, Site Operations, for the project, adding that working in the North can require some creative problem-solving.

“One big challenge is logistics,” he explains. “If you’ve forgotten anything, by the time you get



there, it’s too late. The contractors also face a very short working season, especially because in some cases you have to wait for the ground to thaw before you can dig. Some sites barely have three months when the weather’s nice enough for work to be done. To counter this, we’ve had situations where the contractor’s working all day and all night.”

The short season also necessitates a large workforce on site, often doing very diverse work—from consulting to construction. “DCC is contract managing all of these aspects for DND,” says Dafoe. “Since 65 to 85 percent of the workforce on the sites is Inuit, working as truck drivers, heavy equipment operators and asbestos abatement personnel, cultural awareness is an important aspect of the work.”

Poaps adds that the project management office coordinates not only the DCC service lines but also the consultant expertise required, including engineering, scientific, archaeological and biophysical support, as well as liaison with DND operations on some sites. “This was the first foray for DCC into large-scale project management support,” he says. “It’s been a very successful model—DND has continued to use us throughout the project, for more than a decade.”

Having core, long-term staffers who are knowledgeable not only in project and contract management but also, specifically, in all phases of the clean-up helps to keep the project on time and within budget. When DND advanced the schedule by up to two years at some sites, DCC was able to successfully integrate the change into the project cycle. DCC staff also developed an innovative procurement procedure to allow industry to evaluate and bid on two sites to which, apparently, construction equipment has never been transported overland before.

Dafoe notes that DCC employees also transfer from their home offices to work in the North for the summer. He encourages any interested DCC personnel to discuss this option with their managers and to contact him directly. “This is a great opportunity for any contract coordinator interested in a challenge to receive a significant amount of pre-deployment training and to see this remote part of our country. It’s good experience, focused on both contract and project management,” he explains.

And it’s a key part of the long-term commitment to the project by both DND and DCC.

Site Profile — CFB Esquimalt

Founded in the late 1800s, CFB Esquimalt is one of Canada's most historic bases, which means the two DCC site offices there play a dual role: protecting the base's built history while supporting Canada's modern navy.

Main Office

Site Operations Manager Rick Gudz says his primary client is the Base Construction Engineering Officer, and with their offices all of two metres apart, they work strategically and closely together. "Esquimalt directly employs around 7,000 DND people, so it's quite a busy little spot," he says. "We support whatever they need."

That includes everything from the dockyard's heavy industrial requirements to the Canadian Forces Housing Agency and DND's involvement with the 2010 Winter Olympics.

Typical annual volume now stands at \$15 to \$20 million. Current and future major projects include a \$1.6-million sewage lift station and a \$14-million fire hall. In addition, the office recently completed a \$6-million renovation to the 1890 Fleet Commander's Headquarters. "The challenge was to keep the heritage quality of the structure—its brick came from ships' ballast—while structurally supporting it to the highest seismic standards and building contemporary offices, adapted to a naval flair," Gudz explains.

Supporting this work are professional engineers, project managers, civil and architectural technologists, ex-DND personnel, industrial and process engineering specialists, and contract



Inside the recently renovated 118 year-old Fleet Commander's Headquarters.

administrators with both procurement and management expertise. Thirteen people are employed at Esquimalt's Main Office and up to six at its satellite office in Chilliwack and Vancouver, which supports DND and its assets on the B.C. mainland.

Gudz says that B.C.'s strong economy and labour shortage make human resources, contractor and professional services issues critical. He focuses on building relationships; making sure prospective employees know about DCC's opportunities for growth, training and a long, sustainable career; and ensuring contractors and consultants understand the advantages of working with DCC, including timely payment and exposure to unique projects.

Capital Program Office

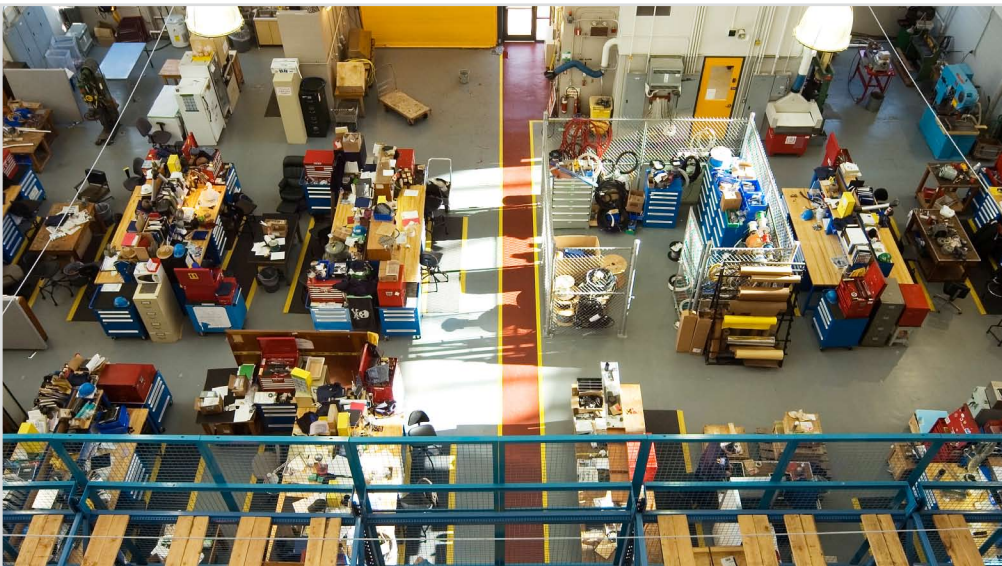
When bases get larger capital programs, DCC often opens a separate capital program office—which is exactly what DCC Esquimalt did in the late 1990s, when the Fleet Maintenance Facility Cape Breton was announced. Expected to be worth a total of \$500 million when completed in 2014, the building will eventually be the second largest in western North America.

"The project is currently about a third completed," says Construction Program Manager Siva Gnananayakan. "In addition, the office has recently managed construction of the \$55-million F-Jetty Colwood Refuelling Facility, the \$16-million Naval Officer Training Facility and the \$6-million Corrosive Fluid Facility." The future includes a \$20-million hazardous materials facility, \$20-million Small Boat Floats facility and B-Jetty.

Gnananayakan notes that 13 qualified and experienced professionals work in the office, including engineers, project managers, architects, Gold Seal Certified personnel and technically qualified personnel, such as contract coordinators and administrators.

"All have very strong backgrounds," he says. That played to DCC's advantage last year, when the capital program temporarily slowed. "Our staff helped other DCC offices, including the National Operations Group. Currently, two of our staffers are deployed in Afghanistan to help with DND's nation-building, reconstruction and development activities."

It's all part of the service at DCC's Esquimalt offices.



When completed in 2014, the \$ 500 million Fleet Maintenance Facility Cape Breton will be the second largest building in Western North America.

Realty Asset Support section delivers cost-effective strategies

Assisting DND to manage the entire life cycle of its infrastructure may seem like a tall order—but that's the job description for the 12 people who work in DCC's Realty Asset Support (RAS) section.

"DND has to abide by the Treasury Board cycle for infrastructure—plan, acquire, use, dispose—so we help them in any way that we can to meet those obligations," says Linda Newton, manager of the RAS section, which is part of DCC's National Operations Group and of the Program and Project Management Service Line.

That includes determining what's important in looking after the infrastructure, assessing the condition of all DND assets across the country, helping the North Warning System with its facility management program, helping DND work on a new preventive maintenance program, and supporting the CF Fire Marshal and the North Warning System office with fire and life safety.

"We help support the client in realty asset management where they don't have the capability to do it in house—this is an important, ongoing process, and we give them continuity," says Newton. "That's key, because if it's something that can be done, our aim is to support DND and enhance their abilities to deliver what they need to do efficiently and cost effectively."



The Realty Asset Support team. Back row, from left: David Loker, Program Support Officer; Bill Fremis, Technical Advisor; Robert MacNeil, Program Support Officer; Ryan Gannon, Project Assistant; Monique Richard, Administrative Assistant; Richard Hughes, Program Support Officer; Jad Daou, Project Assistant. Front row, from left: Michelle Huynh, Administrative Assistant; Linda Newton, Manager, Realty Asset Support; Pat Gallagher Technical Advisor. Missing from picture: Rasheda Nawaz, Program Support Team Leader; Steven Jung, Program Support Officer; Pierre D. Roy, Program Support Team Leader.

hazardous materials last summer and fall, along with using some innovative and environmentally friendly recycling solutions.

"The contractor used excavators with hydraulic shearers to break the building's concrete down into smaller pieces to enable the removal of rebar from it. The rebar went to a steel salvage yard, and the concrete was run through a crusher and used in the parking lot. It's a great environmental solution—the steel's got a value and the concrete allowed us to avoid expending more energy to produce aggregate for the parking lot sub-base," he explains. He adds that the contractor is off to a great start now that demolition is complete, with the foundation in progress.

"The buildings are supposed to be completed in April 2009, and are currently on budget and

on schedule," Brophy says. "The success of large, complex projects like this depends very much on the attention to detail by the contract coordinators, in their on-site inspections, accurate document control and daily diaries. We have a strong, experienced team managing this contract, and we're seeing the benefits every day."

One challenge for the team is that traditional fire suppression systems raise some operational and environmental concerns. "DND is pursuing a new technology called HI-FOG as a result," says Brophy. "Although there is a cost consequence, this is an opportunity to successfully show the system's potential—it could be utilized across North America."

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