

ExIT strategy

Ted Sykes, Exercise Director of Exercise Initial Thunder and Portfolio Manager for the Radiological and Nuclear Cluster at Defence R&D Canada's Centre for Security Science, tells *CBRNe World* about the country's largest ever CBRNe exercise

MUCH of the time "North American" is shorthand for "the United States", yet when it comes to CBRNe you ignore the work done in Canada at your peril. Canada has long been a catalyst in CBRN science and technology, and this has helped drive both its civilian and military response. It should come as no

surprise, then, that their Exercise Initial Thunder (ExIT-08) will be one of the most ambitious in 2008 – possibly only eclipsed by Singapore's Ex North Star 6 later this year. The Exercise brought together more than 350 participants from 13 federal agencies, and a host of provincial and local agencies, for the four-day exercise in February.

The exercise was sponsored by the CRTI (CBRNe Research and Technology Initiative) and had three principal objectives. Of most importance to the majority of the participants was the desire to exercise interoperability among the responder groups and jurisdictions, but perhaps the most pertinent to CRTI, was the chance to



Ex Initial Thunder utilised helicopters equipped with radiation detectors to facilitate sea boarding. ©DRDC

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Siemens radiation detection system

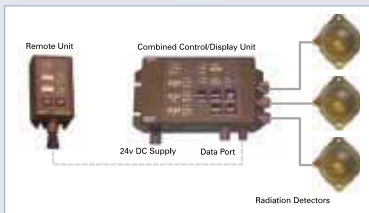
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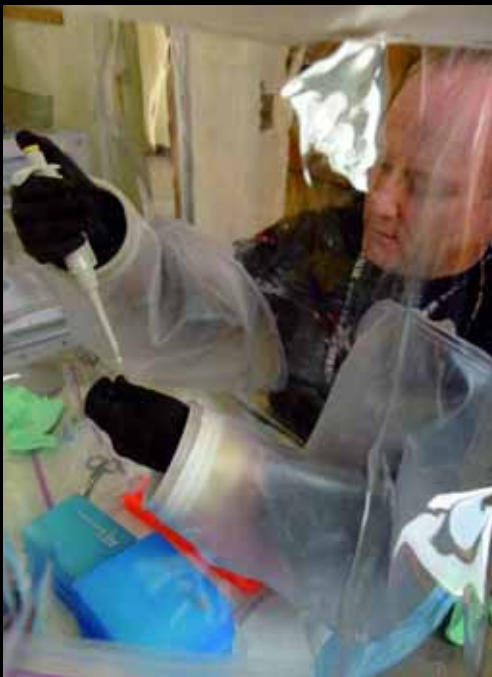
EXIT strategy

exercise new S&T (Science and Technology), protocols and tools in a cross-team field environment.

Down the rabbit hole...

The exercise spanned a range of scenarios and seemed to have a particularly nautical theme, with at least two parts of the scenario happening at sea. The event starts with a radiological threat being detected in the Port of Vancouver; this threat turns out to be two radiological sources one of which explodes and affects 12 people. Following this the Royal Canadian Mounted Police (RCMP) arrest two individuals who lead them to a vehicle containing illicit material. This in turn leads to the discovery of a rad lab and a testing ground for their devices – which is contaminated with radiological isotopes. Following the rabbit further down the hole leads them to a second lab, this one for chemical and biological agents and a nascent mass production facility. Finally, a ship in the Strait of Juan de Fuca is suspected of carrying weapons and is boarded and investigated at sea.

The Exercise Director, Ted Sykes, went into more detail. "It started with the illicit trafficking of two radiological devices," he explained. "Our Canada Border Services Agency was able to detect them, thanks to new technology they have installed in the port. They were the first people on-scene and the first group to have a real role. What they were able to do once they had detected radioactive material was isolate the container, and then deploy their car-borne system to do isotope identification. They also have a VACIS system that is a truck-borne gamma ray machine – effectively a large X-ray on a truck. Once they had determined there was a problem they called 911, which in Vancouver goes to a central call station, and brought in the Vancouver police. They in turn brought dispatched their EOD team to assess the situation. It quickly escalated, so they brought in the Vancouver Fire and Rescue Service's Hazmat team. This team is CBRN trained and can perform on-site decontamination. Since in this scenario



The Exercise brought in 13 Federal agencies with a wide range of skills. ©DRDC

we wanted to get ambulance assets involved, one RDD went off and generated 12 casualties. These needed to be moved out of the hot zone to the warm zone to be decontaminated, and the British Columbia Ambulance Service was on hand to do the medical triage.

"As the scenario escalated yet further we had, for the purpose of the exercise, already pre-deployed a variety of federal assets because of a possible terrorist threat to a fictional global warming conference involving 25 nations. This conference was taking

place in a location nearby, so when the call went out for Federal assets at the Port they were only a few minutes away. We had the National CBRN Response Team and the Federal Radiation Assessment Teams right there. We had the RCMP provincial force on hand to assist with the command and control. When the National Team came in they labeled it a terrorist event and assumed command, but still used the Ambulance and other local assets as necessary."

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command – so command and control of the situation had been evolving all along. To begin with the Canada Border Services Agency was in charge. IC transferred to Vancouver Police, then Vancouver Fire and Rescue with their Hazmat Team. At one point the Ambulance Service was potentially in charge, then the RCMP and then the National Team. The Federal Radiation Assessment Teams were on hand with their two mobile nuclear labs and aerial radiological survey equipment. – a result of the CRTI programme – to

conduct background mapping and isotope identification. Except for the aerial survey capability they were largely working outside the hot zone. When the fictional plume went over part of the city they conducted the radiological surveys and containment.”

“In this exercise, the situation escalated from a simple one involving the detection of illicit radioactive material in two separate containers, to a complex situation involving response elements from the federal, provincial and municipal levels. We simulated a

situation in which some of the radiological material was actually precipitated out of the atmosphere into an area that the teams had to find had to find and clear up. We also simulated the government of Canada response in Ottawa and elsewhere.”

One of the most interesting elements of the exercise was the emphasis they put on forensics – this was one of the stated aims. Forensics is one of the major challenge areas in CBRNe, epitomising as it does a change in ethos, tempo and command. Mr



Evidence collection and sampling was a big part of Ex Initial Thunder ©DRDC

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Sykes suggested it was more integral than that. "If you look at the programme, it is the CBRNE Research and Technology Initiative; we operate under a memorandum of understanding with 19 different federal agencies, and represent the scientific and tech community investment in CBRNE counter-terrorism. We are structured in scientific clusters – a chemical cluster, biological cluster, radiological/nuclear and an explosives cluster. We also have a fifth cluster – the forensic cluster. It was realised early on that if you have

scientific and technical people involved early on in a counter-terrorism response – collecting samples, etc – without having forensics involved, the chain of custody may not be followed or you may be collecting samples in such a manner that "bad people" whom you would like to prosecute in a court of law can't be convicted because the protocols weren't followed. So that is the importance of the fifth cluster. It was created because it is important in all of the other four clusters, and needs to be incorporated in everything we do."

... and out the other side
The interview with CBRNE World followed hot on the heels of the exercise, so it is too early to look at any lessons learned. Ted Sykes was personally impressed by the use of the robots, improvements in sensing and detection equipment and also bomb suits. All these projects were very much at the sub-tactical level, and no technology was injected that caused a major change in play. The play itself was regulated by a robust control team that fed the responders very little information prior to the exercise and injected new bits every 15 minutes. Mr. Sykes admitted the sea boarding was one of the most deliberately difficult challenges of the exercise, and had been designed to stretch the responders. "In my position as Radiological/Nuclear Portfolio Manager we have seen a need to exercise that for some time because, if someone was going to try and smuggle radiological material or components into North America, then the sea route is an obvious one. So we wanted to get the various parties who would be involved in a take-down on a ship, to get the appropriate experts on board and help contain the situation. In this scenario one of our goals was to make it technically complex, so complex that the responders would ask for the reachback capabilities of the federal S&T community and we would have to put federal assets on board the ship with the first responder organisations, so the two could work together. It was a challenge, but also a success."

Currently the team is busy putting together the lessons learned from the exercise, and Ted Sykes indicated some of these would be made available via the CRTI website (<http://www.css.drdc-rddc.gc.ca/crti/index-eng.asp>) in about four-to-six months. "We do make as much information available as we can," he said. "Some of the lessons learned are sensitive and the organisation will want to keep them within their own ranks, so what we can make available is some of the general ones. We want to, and will, share what we can with whoever we can."

