

Gwyn Winfield talks to Ottawa and Toronto Fire Services to find out whether they have great expectations or a concern about hard times

Tale of two Cities

NBC has cast a long shadow over civil responders. For the first years of their life – whether that was 1995 or 2001 – civil CBRN responders were always toiling under the gaze of the military, adapting what was of value and sidelining what was not. Fire services at first were the most quick to adapt, many thought they already knew what CBRN was, and some thought that had been dealing with “CBRN” incidents for years – they were called hazmat incidents and happened on roads and facilities the world over.

CBRN gained such tags as “hazmat with teeth” or “hazmat on steroids”. These phrases, and the military

doctrine that preceded them, have been of limited value at best, and downright dangerous at worst. Now, however, first responders are casting their own CBRN shadow; new lessons, tactics, techniques and procedures (TTPs) are emerging that show how much they have developed.

Canada is one of the progenitors of NBC lessons, one of the world’s big chem/bio defence nations with both well-established military research programmes and facilities – and now a burgeoning civil CBRN defence capability. Kim Ayotte, Special Operations Chief within Ottawa Fire Services, explained where their capability originated from: “Our story starts in the early to mid-1990s.

Ottawa had a grass roots effort, the fire fighters, police and paramedics – and a whole bunch of other people – met up and started organising a hazmat response team. As that developed it became a multi-agency, multi-directional effort; and NBC became a very large issue

following Tokyo and the original World Trade Center attack. As a result it became a greater concern and

Ottawa, as the Canadian capital, has a very well integrated response team ©Ottawa Fire Service

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they started what became known as the National Capital Response team. This had representatives from seven fire services – at the time there were seven fire services, now we have amalgamated and it is just one fire service – they all had different capabilities and materials, joined forces, built this team and generally did a good job. As you know when you build something from the grass roots up it is difficult to get buy-in and funding unless you have people in the know. And at the same time we were challenged with the City of Ottawa amalgamating all of the principalities into one, so the political pressure wasn't on NBC but the amalgamation, so there wasn't a lot of time devoted to CBRN. As a result of the amalgamation the city decided to give a large sum of money to an emergency management programme, which was an all-hazards-approach programme and one of the projects identified was a multi-agency, interoperable CBRN response team, from the municipal level. What we did in developing that programme and writing it up was identify the need to use some of the technical expertise that was devised by the National Capital CBRN Response Team, use the knowledge and individuals to capture some of their momentum to develop the team. We furthered the project, put together a programme and developed a multi-response plan. We are now in the implementation of that plan. We still have some growing to do; however, I don't want to mislead the readers into thinking there is no response, we have had CBRN response since the mid-90s and it is based on the first responder response capability."

As is often the case, the capital has the jump on other cities in terms of lead time because of the expected higher threat, yet multi-agency is the way forward for Canada. "We have worked with Kim at a provincial level, but there are some slight differences in philosophy between Ottawa and Toronto," said Captain Bill Casey, Special Operations CBRN POU for Toronto Fire. "The team here is trying



A long experience of working together has sanded down most of the personality clashes between services ©Ottawa Fire Service

to build a joint team model – fire service, police and EMS – to bring together multi-disciplines in the team, so we can deal with a range of incidents that could occur. We draw on the specialists but have a lead from fire, police and EMS who all work out of the same office, even though the operators work independently – so the fire assets are based in fire houses, EMS in theirs etc. When a CBRN type call comes in, the three groups bring their resources together and work as one team."

The multi-agency approach is not unique to Canada, a number of countries have tried something similar (such as the UK's MAIAT – Multi Agency Initial Assessment Team). Yet, as Orwell suggested, some agencies are more equal than others and many of these teams have been beset by arguments over which is the senior service. These tend, in time, to bed down as the worst egos are sanded down or removed and a workable model approached. Has this been the case in Ottawa?

"We have sanded most of them down," agreed Kim Ayotte, "though we still have some minor philosophical differences on who does what at the scene. So while we are still having active discussions we

would not see it as a feud, merely a philosophical discussion. For example, how many responders are needed to go into the hot zone to do the various tasks? We have looked at other models, London, Singapore, Toronto, Calgary, and a lot of them seem to go towards a multi-agency response with the agencies working as a team, taking down barriers and working in the hot zone. We are working towards that end but we still have a few discussions and differences on how many people do you put in danger to identify what you are dealing with, for example."

Decisions on how many people enter the hot zone inevitably become involved with what the role of the people going in there are to do. This is where Canada perhaps has an easier time of it than their cousins south of the border; the sheer abundance of assets in the US can mean that everyone enters the hot zone, as all of them are equipped. Canada having invested differently, in live-agent training, for example, has fewer assets per service, giving each agency defined roles once they are in the hot zone. "In general terms, detection roles have been assigned to the fire service," said Captain Casey. "We train together, however, and on arrival on

the scene we create a reconnaissance team to investigate exactly what we are dealing with. The protocols here call for a bomb tech from police, hazmat tech from fire and maybe, depending on the circumstances, an advanced care individual from EMS. These all go down range to investigate whatever the event is. Therefore most of the detection equipment is from the hazmat tech: air monitoring, rad detection etc.”

Kim Ayotte agreed, “Fortunately, or unfortunately, depending on how you look at it, we don’t have the resources to make everyone a jack of all trades, so we are very functions based. Certain functions are the task of certain agencies, and other agencies play support roles and that is how we manage the scene in Ottawa. So the detection of an incident is the responsibility of the fire service with the support of police and paramedics. Mass casualties, or any patient care, is the response of the paramedics; they are the key responders and they have partnership with the police. Crime scene, evidence collection, explosives are all the responsibilities of the police, and to some degree a partnership with fire and paramedics. It is function based but the nice thing is we have 24/7 coverage, meaning that out of the fire service we have people trained to the CBRN/hazmat technician level available on a 24/7 basis, not on call, but on duty at all times.”

Part of the driver on training, certainly within fire services, has been the need to educate the base-level user of the characteristic differences between CBRN and hazmat, as Kim Ayotte explained. “Personally I understand why they talk that way as the response protocols are very similar between hazmat and CBRN. There are, however, fundamental differences that you have to recognise and be familiar with to understand it is not hazmat. You might be dealing with mass casualties – the terrorists aim is to get mass casualties – it is likely to be a fast-reacting chemical agent, so it has to be a fast response, as opposed to hazmat which is about

slowing things down. So the fundamental response philosophy is different. You are also dealing with a crime scene, whereas for hazmat it is usually accidental in nature, so there may be administrative investigation. Crime scenes have different considerations and you don’t want criminals to get away with something as a result of your inability to protect evidence. It is also a major resource requirement, many of our resources will need to go on the road, so that will stress the system, unlike hazmat – CBRN tends to be a larger incident. And finally the media, hazmat will only bring a few media, CBRN will be mass media and you need to have systems in place to deal with that, you have to expect them to be there.”

“There can be that [CBRN=hazmat] mindset,” agreed Bill Casey, “but because of the training we have done we have been able to overcome that. There are still those who are going to stick hard and fast to the ‘fact’ that it is the same thing, but once they get into the training they realise the differences. One of the big advantages is that when we work with police and EMS counterparts we hear it from their angle, and since they are not exposed to hazmat in the same way they are bit more open minded. As a team we have been able to overcome that mindset.”

Despite the attempts to decouple the hazmat-CBRN mindset, the detection tools that both fire services have are both driven towards traditional fire hazards – chemical and radiological. Bio detection for both cities falls down to the faithful combination of hazmat ID and assay strips to get a “Bronze-level” confirmation before it is handed over to labs for a positive detection and identification. The other role that the fire services have embraced is mass decon, and both services have their own decon assets. “It is based on the location of the incident, we have both capabilities [ability to set up emergency decon and inflatable structures]. If a large enough area and people have been attacked then you can easily knock sprinkler heads off in

car parks and have people go through the garage and be deconned. We tend to use our decon experts to ask them in the first few minutes how can we get the biggest bang for our buck. We have access to inflatable tents and decon trailers, but it all takes a little longer to set up, and there is an interesting system that we could utilise here that we learned from Montreal, where they take buses to decon individuals by hooking up water to the interior of the buses and putting tarp over them you can deal with different gender issues.”

Gender and ethnicity are going to be the major bugbears of fire services (or anyone else who has to do mass decon): how do you manage people’s beliefs in an emergency? There are no solid answers to that. Chief Ayotte admitted that they have reached out into the various communities in Ottawa, but that the take-up had not been great – and this is true of most multi-ethnic cities. One problem that usually accompanies decontamination – whether small or large scale – is the destruction of evidence as water/foam etc is sloshed around. This conflict between saving lives and saving evidence is a constant battle between



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police and fire and usually can only be resolved through patient training and explanation (though some nations, such as Singapore, have allowed fire personnel to collect evidence admissible in a court of law). Ottawa and Toronto deal with the challenge in much the same way: by having small multi-agency/disciplinary teams go into the scene together, they can moderate each other's behaviour. "Our recon team, the team that goes in to assess what we are dealing with, will include police forensic and bomb partners. So we will go in with a paramedic, forensics and a bomb tech, two hazmat techs," said Kim Ayotte, "and if the forensic tech is not on scene right away then the bomb tech will understand forensic considerations; but we like to go in with forensics as well. That said, when it comes to deconning individuals we have a system in place where when we remove people's clothing we are bagging it and tagging them so that further down the road the police can assign the bag. We are also working on a system where the people coming through decon will be photographed again for documentation and security – but also for people's personal belongings for that matter – and these images are secured by the police service."

While the multi-agency teams are still relatively new, they are still being improved on. "Right now we are working with the federal government on the CRTI research initiative and we are also researching UAVs for use in hazmat incidents. We understand that there are some capabilities out there that might suit our needs with the detectors that we want to use, so we working on future unmanned aerial devices, either heli or planes – obviously planes are a little more difficult with sky scrapers – so we are doing our background. Joint training continues to be our focus and at the forefront we are interested in pursuing more rapid response. As a fire service we tend to have a rapid response, but from a hazmat CBRN perspective not so much; it is not as rapid as everything else. So we are looking at forward teams that can go in and do a very quick assessment of what we are dealing with in the first five to seven minutes and update the hazmat team as it comes forward and a rapid decon capability so we can train people to do good and rapid decon in a short period of time as opposed to the big inflatables."

Toronto's aims are a bit smaller, "We need to keep on top of the technology, there is a lot out there

and we need to decide what we need for the city and what will work best for our personnel and keep us safe. We have been lucky with our system here, we have had a lot of assistance from federal and provincial government as far as funding to build a solid response through a lot of training and acquisition of technology, the biggest challenge is to be able to move forward and maintain the capability that we have."

This concern over maintaining the current level of funding and capability is present in both cities, as Kim Ayotte explained: "Complacency is always a consideration, especially in Canada. We tend to see ourselves as a peaceful nation and if you ask people in the street whether a terrorist attack is likely in Canada they would say, 'No, we are too nice for that!' The reality is that we know what lists we are on and know it is a matter of time and have to be prepared and not complacent." As Captain Casey points out, Canada has been lucky in that all its terrorist plots have been detected before inception, and that this tends to reinforce a belief that it can never happen. Regardless of public perception, the work that is going on at a municipal level, when combined with some of the federal work through the CRTI, but also organisations like RCMP (Royal Canadian Mounted Police) and JIRU (Joint Incident Response Unit), means that Canada has a very strong response. The challenge seems to be to maintain the evolution without an attack. The military has the "advantage" of being sent to places to face opponents with these weapons, forcing a constant evolution, while the passive defence at home is more at danger from inertia. Perhaps what we are seeing is the last major evolution of civilian CBRN, and that further developments will be iterative improvements on the fringes – increases in decon solutions for example. But to stretch the Charles Dickens' analogy, expectations will now need to be managed to ensure that complacency doesn't entail a bleak house.



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