

**Nuclear Defence: An Explanation of Canada's Cold
War Civil Defence and National Survival Effort?**

For

Veterans Oral History Program

(Professor Jim Wood)

An essay by
Martin Roznowski
V00705540

March 30th, 2011

The Cold War persisted for more than four decades and was one of the most important events in shaping the history of the twentieth century. Spanning from the latter half of the 1940s to the end of the 1980s, it was the continuation of state political conflict, military tension, proxy wars, and economic competition between two great hegemonic powers – the United States of America and the Soviet Union.¹ Although Canada played only a relatively minor military role, the Cold War was, for those who grew up and lived through it, “an all encompassing experience, the very air that they breathed.”² Therefore, it is fair to say that the war gave rise to a new Canadian military “profession” dedicated to planning for the impact and aftermath of a nuclear attack. In an era defined by the threat of nuclear annihilation, Canada, from the early 1950s to the late 1960s, attempted to prepare its civilian and military populations for nuclear attack through staged drills, evacuations, field exercises, and carefully coordinated campaigns of training and rehearsal. However, one must ask, how did Canadians understand the implications of these preparations for biological, cultural, and political survival on the scale necessary for surviving a nuclear war? How did people take part? Who was on the sidelines influencing their decisions, and did they anticipate an eventual and efficient performance in the event of an attack? Questions such as these are continually being addressed by scholars working to fill a void pertaining to Canadian Cold War civil defence and national survival efforts. With the use of oral histories, archived news reports, and published historical accounts, this essay will address this topic, seeking to explain these civil defence efforts and how they affected Canadians throughout the 1950s and

¹ J.L. Black and Norman Hillmer, eds., *Nearly Neighbours Canada and the Soviet Union from Cold War to Détente and Beyond* (Kingston: R.P. Frye & Company, 1989), 12.

² Reginald Whitaker and Steve Hewitt, *Canada and the Cold War* (Toronto, Ontario: James Lorimar & Company, 2003), 6.

1960s. This will include examining the role of the Canadian Militia, the construction and operation of nuclear command bunkers, preliminary warning systems, and how the general public was educated. In doing so, I will argue that in the 1950s and 1960s Canada took the proper steps and was, in fact, sufficiently prepared to deal with a nuclear attack.

Cold War national defence, as articulated in Canada, was a corollary of the military's mandate of defending Canadian territory and the training of civilian personnel. Although often considered an entirely military effort, in reality civil defence in this era was a joint civilian and military responsibility that involved civilians, industry, and governments. It consisted of the planning, practicing, and, in time of emergency, the implementation of plans for protection of people, property, and the government in the event of nuclear war. According to a schematized report commissioned early in the Kennedy presidency, "civil defence programs were the confluence of three kinds of concerns: protection, recovery, and integration."³ Protection consisted of education and training, the preservation of essential records, the establishment of shelter systems, early warning capability, evacuation, medical, radiological defence, fire prevention, and maintaining law and order. The recovery stage would include rescue and reconnaissance efforts, followed by a concentration on food and water, housing, employment, manufacturing, burial, and trade. Lastly, integration would be directed towards continuity of government, command and control, broadcasting, communications, and emergency legislation. This system of organization constituted the agenda for developing Canada's policies and plans in to the event of a nuclear attack.⁴

The Militia – Civil Defence and National Survival

³ Tracy C. Davis, *Stages of Emergency Cold War Nuclear Civil Defence* (London: Duke University Press, 2007), 21.

In the mid 1950s and early 1960s, Canada's government and the Canadian Army were reassessing the role of the Militia. The requirement for reserve forces was being called into doubt owing to the development of atomic weapons, the establishment of the NATO alliance,- the rise of United States leadership in defence matters, and growing demands for peace-keeping forces. It was these developments that led the Canadian Government to assign the militia to a civil defence and national survival role.⁵ Many reserve regiments were stripped of their military duties and retrained in national survival. As a serving militia officer during this period of drastic shift, Major (Ret.) Gary Del Villano recalled how "military training [in his regiment], except the most basic training, stopped. [The Canadian Government] would not let us use our tanks any longer, and to make sure, they wouldn't give us any fuel."⁶ He recalls that this had a very serious effect on the morale and structure of the militia. Well-trained post-Second World War veterans, with extensive training and experience in military operations, wanted nothing to do with civil defence. As a result, the manpower strength of the militia significantly dropped.⁷ Instead of mobilizing for offensive operations in the event of a nuclear attack, the militia would perform specialized tasks on the domestic front in an effort to protect Canadian civilians after a nuclear attack. However, before the militia could conduct these operations, they required specific training to deal with the possible hardships they could expect to encounter in a nuclear emergency.

The militia's training in this period was redirected from a combat role towards a wide variety of different fields. According to Del Villano, the training came to focus on tying

⁴ Tracy C. Davis, *Stages of Emergency Cold War Nuclear Civil Defence*, 21-22.

⁵ George M. Urquhart, *The Changing Role of the Canadian Militia, 1945-1975* (Victoria: University of Victoria 1978), 76.

⁶ Del Villano interview, 19:52.

knots, manoeuvring on ladders, jacking rubble, first aid, operating switchboards, establishing field telephones, running cables, conducting traffic control (with instruction delivered by the local police), how to detect radiation, and how to deal with chemical gases.⁸ These skills, would then hypothetically be used to conduct re-entry operations into cities, in the hope of finding and rescuing survivors of a nuclear attack. However, as recalled by Del Villano, “we [the militia] did not have nuclear biological chemical warfare suits, at least enough to go around, so there would be a limit as to how far in [to a city] we could go.”⁹ In order to detect the radiation levels and whether a city was safe for re-entry operations, two of the militia’s first tasks would be to establish “Rad-lines” and fallout patterns to indicate radiation levels and the estimated direction in which fallout would spread.

These fallout patterns would be mapped on large plotting boards and working with information supplied by local weather accounts, reports from NORAD headquarters, and radiation detectors scattered throughout the nation. Being personally responsible for plotting these fallout patterns, Lieutenant Colonel (Ret.) Cecil Berezowski recalls that “at least 20 of us had been trained. We would plot the shifting winds, the direction of the main winds, the changes in temperature, and develop fallout patterns depending on the magnitude and tonnage of the blast. [We would then relay] this information to all the major centers conducting re-entry operations.”¹⁰ This information would be used by re-entry personnel equipped with a Rad-counter, which Del Villano remembers as “a little plastic container that

⁷ Del Villano interview, 20:00.

⁸ Del Villano interview, 17:55.

⁹ Del Villano interview, 17:30.

¹⁰ Berezowski interview, 33:14.

was read by an instrument, which would tell you how much radiation you had absorbed.”¹¹ Therefore, these militia re-entry forces would be aware of how far into a blast zone they could enter and how long they could stay. Additionally, these militia units were provided with rope, wooden beams, gas masks, sachets of atropine in hypodermic needles (used to deal with immediate radiation effects), and hoses in order to carryout their objectives.

In addition to the training of regular militia reservists, the Canadian Government under John Diefenbaker also established the Special Militia Training Program. This program, held in local armouries across Canada, involved obtaining volunteers from among the civilian population, enlisting them in the militia under special conditions, and giving them a six to eight week basic recruit and civil defence training program in marching, small arms fire, rescue operations, first aid, and traffic control.¹² As a former militia soldier, Captain (Ret.) Leslie Triplett remembers the motivation for this program being that “if something happened [nuclear attack] a good deal of the citizenry could assist the regular militia [in civil defence operations].”¹³ By establishing an outreach program of this kind, he remembers that many people joined the militia, even some who were otherwise unemployed. It provided people with a form of employment and income while also preparing them for civil defence operations. According to Triplett, some of those who joined “were trainable but most were not highly motivated. They were more motivated by the pay check for eight weeks than anything else.”¹⁴ The SMTP also recruited teenagers, working men from industry and business, aboriginal peoples, and even homeless persons. Del Villano, who was in charge of

¹¹ Del Villano interview, 26:50.

¹² Del Villano interivew, 37:50.

¹³ Triplett interview, 5:00.

¹⁴ Triplett interview, 5:40.

training 150 new recruits, recalled having to “beg borrow and steal to get enough people that could come out and do it.”¹⁵ He remembers the primary obstacle as being the hesitancy of many people to be absent from their regular day jobs to join the militia.

Overall, the militia in this period was being well trained for its new role, prepared, and equipped to conduct civil defence operations. Even though the effects of a nuclear blast would have been extremely devastating, having this large number of trained professionals would contribute to the survival of at least a handful of individuals and would make the transition from a ‘protection’ phase to ‘recovery’ phase that much more effective. Not only did the militia prove that several Canadians were prepared to deal with a nuclear disaster, but its efforts also showed that the government was taking the proper steps in order to ensure survival.

The Diefenbunker – Regional Command Bunkers and National Survival

Between 1959 and 1961, John Diefenbaker’s Government, concerned with national survival, built a massive Central Emergency Government Headquarters (CEGHQ) facility outside Ottawa that became popularly known as the “Diefenbunker” or CFS Carp. Located outside the small eastern Ontario town of Carp, a short drive from Ottawa, the 100,000-square-foot structure was designed to withstand the detonation of a five-megaton nuclear weapon as close as one mile away.¹⁶ This nuclear bunker was also designed to house more than 500 government officials, including the Prime Minister, his cabinet, and the Governor General in the event of a nuclear attack. The top level of the bunker included a decontamination chamber, medical and dental facilities, accommodation for members of the

¹⁵ Del Villano interview, 42:00.

¹⁶ Reginald Whitaker and Steve Hewitt, *Canada and the Cold War* (Toronto, Ontario: James Lorimar &

Royal Canadian Mounted Police (RCMP) and the Governor General. The second level would house the war cabinet room, the military information center, the Prime Minister's and cabinet minister's offices and bedrooms, and a Canadian Broadcasting Corporation (CBC) studio. The third level featured the cafeteria, kitchen, and senior officers' quarters. The fourth and final level housed dormitories for the remaining staff.¹⁷ As it happened, Canada was never attacked and CFS Carp was never fully manned. However, during nationwide civil defence rehearsals such as Tocsin B in 1961, the bunker successfully issued directional and operational commands. Overall, this facility was designed to ensure the continuity of government and direction of personnel conducting rescue operations.

Although the construction of the bunker was exposed in newspaper reports, compromising its overall secrecy, there was a substantial effort to keep it secret during its first few years of operation. For example, former communications technician Larry McDonald worked eight hour shifts in the bunker over a period of five years, and recalled that:

we would tell the people it was a communications squadron, that's all. If they started pressuring you to say something, you would say "can you keep a secret," and they say "yes we can," and I would say, "so can I." That's the way we got around it but if people kept after you, you would inform the RCMP that people were getting too nosey and they would deal with the situation."¹⁸

Due to its purpose of securing the continuation of government and the secrecy surrounding its construction, only certain individuals were given the opportunity to enter the bunker during a nuclear attack. These included the Prime Minister, Governor General, high-ranking

Company, 2003), 121.

¹⁷ Tracy C. Davis, *Stages of Emergency Cold War Nuclear Civil Defence* (London: Duke University Press, 2007), 298.

¹⁸ CBC Digital Archives, "Cold War: Reporting live from the Diefenbunker," Canadian Broadcasting

senior military officials, members of the RCMP, three CBC broadcasters, numerous politicians, and staff to operate the bunker's facilities. Tom Earle, one of the three designated CBC broadcasters selected to enter the bunker, recalls the traumatic experience of 'certain' people being selected to go to the bunker:

Wives and children were excluded. The Prime Minister had a room, the Governor General had a room, and the rest of us had bunks. "There was a sort of a dorm effect to the idea." When I look back I can imagine some civil servant such as a RCMP officer, leaving, waving goodbye to his wife and 3 kids in a station wagon and wondering, when he came back out of this bunker, if anything would be left. You can imagine the mental turmoil that could have been going on in people's heads.¹⁹

Similarly, Lieutenant Colonel Richard Maltby, who was one of the military officials permitted to enter the bunker, recalls:

One morning, [During Cuban missile crisis], it looked so bad that I took my shaving kit, a change of underwear and put them in a club bag. I advised my wife and children to stay put, and if things got worse, fill everything with water, move the food downstairs and stay in the basement. That's the only thing I could tell them...and this was very inadequate protection. I wasn't allowed to tell them where I was going. I had to leave them behind.²⁰

Similar but much smaller bunkers were located throughout all the provinces except for Saskatchewan, New Brunswick, Prince Edward Island, and Newfoundland. These bunkers would also house provincial governments and 'essential' personnel.

These regional command headquarters located in other parts of the country would communicate with the main bunker located in Carp in order to organize and direct post-nuclear-attack integration, protection, and recovery operations. If communications with Carp were not possible, regional commissioners, assisted by a small committee of senior federal

Corporation, http://archives.cbc.ca/war_conflict/cold_war/clips/1468/ (accessed March 24, 2011).

¹⁹ CBC Digital Archives, "Cold War: Reporting live from the Diefenbunker," Canadian Broadcasting Corporation, http://archives.cbc.ca/war_conflict/cold_war/clips/1468/ (accessed March 24, 2011).

²⁰ Maltby interview, 6:15.

and provincial officials and a military advisor, would assume the powers of federal government and deal directly with other provinces and the United States concerning military power and resources.²¹ Overall, it can be seen the Canadian Government was prepared both federally and provincially to maintain, coordinate, and command operations during and following a nuclear attack.

The General Public – Education and Rehearsal of Civil Defence

During the fall and winter of 1953, the Canadian Government organized the first nationwide publicity campaign to convince Canadians of the need to adopt civil defence measures. The federal civil defence agency, in cooperation with its provincial and municipal counterparts, employed the “On Guard Canada!” Civil Defence Convoy to make the case that the Atlantic and Pacific Oceans separating Canadians from Cold War conflicts in Europe and Asia no longer provided adequate protection. The enemy, at the present time, was capable of reducing their cities to rubble with atomic bombs, “salting the earth” with volatile biological agents, and poisoning their air with suffocating chemicals.²² As recalled by Maltby, who was one of many people responsible for presenting this exhibit, “we had a big board that illustrated Canada. It showed the distant early warning line (DEW Line), had different lights, and was 20 feet across and 8 feet high. It was also full of electrical circuits and little bombs that went off with flashes that would wake the people up.”²³ To meet the challenges of nuclear warfare, more than 100,000 citizens of all ages were shown this exhibit and taught

²¹ Tracy C. Davis, *Stages of Emergency Cold War Nuclear Civil Defence* (London: Duke University Press, 2007), 299.

²² Andrew Burtch, “Armageddon on Tour: The “On Guard, Canada!” Civil Defence Convoy and Responsible Citizenship in the Early Cold War,” *International Journal* 61, no. 3 (2006): 735-736.

²³ Maltby interview, 42:20.

how to support civil defence in their homes and in their communities.²⁴

In the mid-1950s, media blitzes increased public knowledge about the basics of nuclear bomb effects, immediate self-protection, and home preparation, while outreach through different youth groups, service clubs, and other types of formal social affiliations provided conduits to reinforce, elaborate, and rehearse the many concrete messages.²⁵ As recalled by Triplett, there were numerous ways in which the public was informed about civil defence in event of nuclear war. These included: “pamphlets, radio programs, and television shows (we would call them infomercials) that would show a family dutifully hunkering down under tables, going down to the basement or getting into their bomb shelter.”²⁶ The Canadian Government encouraged people to practice these procedures and also reminded them to store water, food, flashlights, and transistor radios, in a secure location to be used in the event of an attack. There were also television programs on how to handle the large amounts of fallout that were expected following a nuclear blast. This consisted of cleansing any accumulated fallout on one’s body by heading to the nearest army “bath platoon,” which would setup mobile showers by a creek, in order for people to thoroughly wash down near a river under the supervision of the military.²⁷ In addition, children were taught the proper ways in which to deal with an attack. During the mid-1950s, The Canadian Government implemented an American cartoon of a turtle named “Bert”, which was used to teach generations of Canadian school children to “duck and cover” in the event of a nuclear explosion.²⁸ Although the

²⁴ Andrew Burtch, “Armageddon on Tour: The “On Guard, Canada!” Civil Defence Convoy and Responsible Citizenship in the Early Cold War,” *International Journal* 61, no. 3 (2006): 735-736.

²⁵ Tracy C. Davis, *Stages of Emergency Cold War Nuclear Civil Defence* (London: Duke University Press, 2007), 28.

²⁶ Triplett interview, 28:10.

²⁷ Triplett interview, 22:30.

²⁸ Tracy C. Davis, *Stages of Emergency Cold War Nuclear Civil Defence* (London: Duke University Press,

children may or may not have taken the threat seriously, the Canadian government was taking the proper actions to educate all members of the population.

In addition to educating the masses, the Canadian Government implemented local, provincial, and nation-wide rehearsals to imitate an actual nuclear attack. For example, Operation Lifesaver in 1955 was a mass evacuation of a quarter of Calgary's suburbs. An estimated 25,000 people moved according to prearranged plans out of Calgary, with press television and radio issuing instructions. School children were all told to go straight home as fast as they could, housewives left their daily activities, businesses closed down, and men took their cars home to pick-up their families. People were instructed to take food and clothing for one full day and to follow routes out of town that had been organized and cleared by the police in conjunction with city and provincial civil defence organizers.²⁹

On the other hand, Operation Tocsin B in 1961 was an emergency preparedness drill by the Government of Canada that simulated a nuclear attack on Canadian soil. Thousands of civilians, law enforcement agencies, and both provincial and municipal governments took part in the exercise. A main part of the exercise, which differentiated it from others, was a thirteen-minute radio program that was broadcast by every radio transmitter in the country. This radio broadcast explained to Canadian citizens what to do and where to go.³⁰ Being in the militia at the time of this national rehearsal, Triplett recalls "sitting at an intersection on a major highway, with submachine guns, looking very military, while civilians drove by. It was on the radio that this exercise was going on and there were radio broadcasts of 'this is a drill,

2007), 25.

²⁹ CBC Digital Archives, "Cold War: Reporting live from the Diefenbunker," Canadian Broadcasting Corporation, http://archives.cbc.ca/war_conflict/cold_war/clips/1461/ (accessed March 25, 2011).

³⁰ CBC Digital Archives, "Cold War: Tocsin B - This is not an emergency," Canadian Broadcasting

this is a drill”³¹ but still, most people looked at our gang of armed soldiers with bafflement.”³¹

Overall, media efforts and rehearsals like Lifesaver and Tocsin B show that the Canadian Government not only took the proper steps towards ensuring the Canadian public was aware of the dangers of nuclear war, but were also made aware of what to do in the event of a nuclear attack. With the use of exhibitions, television shows, radio broadcasts, and literature, Canadian citizens were provided with the proper resources to educate themselves on civil defence. They were also given the opportunity to participate in numerous local, provincial, and nation-wide rehearsals that further enhanced their preparedness and readiness.

The Radar Lines and Early Warning Sirens

Due to Canada’s geographical proximity to the United States and its economic and military relationships, there was a need -to protect itself from a possible Soviet attack. To do so, Canada needed an early warning system to detect an opening attack by the Soviet Union against North America. In the early 1950s, such an attack would most likely involve Soviet bombers flying over Canadian territory on their way to drop their nuclear payload on U.S. targets. As a result, three separate radar systems were built in Canada, all at the behest of the United States, thereby creating a certain degree of controversy surrounding their financing and who would control them.³²

The first radar system to be built, the Pine Tree Network, was in service by 1954 and stretched from Vancouver Island to Newfoundland. The notion was that this radar network would pick up enemy planes entering North American airspace, providing the government,

Corporation, http://archives.cbc.ca/war_conflict/cold_war/clips/1466/ (accessed March 26, 2011).

³¹ Triplett interview, 12:18.

³² Reginald Whitaker and Steve Hewitt, *Canada and the Cold War* (Toronto, Ontario: James Lorimar & Company, 2003), 119-120.

military, and civilians with three to five hours of warning to evacuate and get prepared. On sounding the alert, air force bases would immediately scramble fighters, the regular army ~~forces~~ would mobilize, and regional sirens, found in most populated areas of Canada, would warn the civilian populations.³³ In 1957, pressure from the United States led the Canadian Government to build a second radar line further north, which became known as the Mid-Canada Line. It featured ninety-eight radar stations, both manned and unmanned, which stretched across Canada along the 55th parallel.³⁴ As recalled by Del Villano, “this was a huge operation. In fact, my uncle had a contract to transport parts to build [the Mid-Canada Line] but soon after had to start building farther into the arctic [as a result] of a new threat.”³⁵ This new threat was the emergence of the inter-continental-ballistic-missile (ICMB) in the late 1950s which spurred the United States to request the construction of a third radar line on Canadian territory. This system, known as the Distant Early Warning Line (DEW Line), was built in the Arctic regions of Canada.³⁶ Established along the 77th parallel, the DEW Line featured forty-two radar stations and was supposed to provide Canadians with a reasonable amount of time to evacuate intended targets.³⁷

The implementation and construction of these radar stations provided Canadian citizens with the proper early warnings systems to detect nuclear attack. Having these systems in place would not only provide Canadians with sufficient time to evacuate “key” personnel and large portions of the civilian populations but also allow them to mobilize the militaries to deal with the impending destruction. Although with the emergence of ICBMs

³³ Triplett interview, 18:20.

³⁴ Reginald Whitaker and Steve Hewitt, *Canada and the Cold War* (Toronto, Ontario: James Lorimar & Company, 2003), 120.

³⁵ Del Villano interview, 13:30.

this warning time was severely decreased, it was still better than no warning at all. Canada was thus as ready for war as could be expected under these circumstances.

Canada during the 1950s and 1960s was prepared to deal with the dangers of nuclear war. The oral histories of this event reflect this statement by recounting in fine detail the role of the militia, the establishment of nuclear command bunkers, efforts to ensure the general public was educated, and an explanation of the preliminary warning systems that were set in place. Recollections drawn from individuals who participated in, organized, and lived through the events and operations of this era, combined with scholarly literature and archived news reports, portray an image of preparedness and readiness. The militia was re-trained and made ready to commence rescue operations, countering the threat of radiation and assisting the government in any way they could. The government constructed underground bunkers for important personnel to maintain order, allowing them to issue statements to the nation and direct all pre- and post-attack operations. The civilian populations were educated by government programs on the effects of radiation, how to survive a blast, and what they were expected to do in the event of an attack. They participated in local, provincial, and nationwide rehearsals to train and hone these skills. Lastly, the Canadian Government constructed radar stations throughout Canada to detect nuclear attacks. These stations would alert the nation of an impending attack, giving Canadians enough time to prepare for impact. By and large, Canada was prepared for nuclear war. Whether or not it would have succeeded was at that time yet to be seen, and remains so to this day.

³⁶ Berezowski interview, 36:50.

References

- Berezowski, Cecil. Interviewed by Martin Roznowski. March 12, 2011.
- Black, J. L. and Norman Hillmer, eds. *Nearly Neighbours Canada and the Soviet Union from Cold War to Détente and Beyond*. Kingston: R.P. Frye & Company, 1989.
- Burtch, Andrew. "Armageddon on Tour: The "On Guard, Canada!" Civil Defence Convoy and Responsible Citizenship in the Early Cold War." *International Journal* 61, no. 3 (2006): 735-756.
- CBC Digital Archives. "Cold War: Reporting live from the Diefenbunker." Canadian Broadcasting Corporation. http://archives.cbc.ca/war_conflict/cold_war/clips/1468/ (accessed March 24, 2011).
- CBC Digital Archives. "Cold War: Calgary Evacuates: Operation Lifesaver." Canadian Broadcasting Corporation. http://archives.cbc.ca/war_conflict/cold_war/clips/1461/ (accessed March 25, 2011).
- CBC Digital Archives. "Cold War: Tocsin B - This is not an emergency." Canadian Broadcasting Corporation. http://archives.cbc.ca/war_conflict/cold_war/clips/1466/ (accessed March 26, 2011).
- Davis, Tracy C. *Stages of Emergency Cold War Nuclear Civil Defence*. London: Duke University Press, 2007.
- Del Villano, Gary. Interviewed by Martin Roznowski. March 5, 2011.
- Maltby, Richard. Interviewed by Morgan Lithel. February 7, 1984.
- Triplett, Leslie. Interviewed by Martin Roznowski. March 4, 2011.
- Urquhart, George. *The Changing Role of the Canadian Militia, 1945-1975*. Victoria: University of Victoria 1978.
- Whitaker, Reginald and Steve Hewitt. *Canada and the Cold War*. Toronto, Ontario: James Lorimar & Company, 2003.

³⁷ Reginald Whitaker and Steve Hewitt, *Canada and the Cold War*, 120.