

## California Cadet Corps Training with Integrated Emergency Building Egress

In about 1969 or 1970 I was teaching a unit of instruction that I called Chemical, Biological, and Nuclear Warfare (CBN) in my California Cadet Corps class. As a chemist, I was interested in conveying information about the toxic nature of many of the chemicals that have been and could be used in modern warfare. My course also covered the effects of nuclear radiation and associated protective measures, and the potential for using available biological agents. In today's terms, these items are called agents of mass destruction.

I often visited the Educational Surplus warehouse for the State of California searching for items that I could use in my California Cadet Corps program. The equipment that I was able to purchase for the school usually supported an extensive outdoor education program such as shelter half tents, canteens, field jackets, and field kitchen paraphernalia. However, one afternoon I discovered an obsolete M-18 Chemical Agent Detectors Kit that was essentially complete. It would be a perfect training aid for my CBN class so I bought it. These kits had small 1/8 inch diameter glass tubes, sealed both ends, which contained material which would absorb possible chemical agents when air was drawn through them using one of the included squeeze bulbs.

I didn't want to just show the class the chemical agent detector to Cadets, I wanted to make it a little more interesting and realistic. I modified the sample collection tubes with a chemical that would turn the appropriate color when just a little water solution was added. I had these tubes set up to test several different "simulated" toxic chemical agents that were common household items.

During the previous several days of classroom instruction I had stressed how really deadly that some of the chemical warfare agents were with special emphasis on the deadly nerve agents. I had also covered how all of these chemical agents could be neutralized by using DS-2 from a fire extinguisher tight spray bottle that I had also obtained from Educational Surplus. One of these devices was filled with water and had a CO<sub>2</sub> cartridge installed to charge it. To be even more realistic, I was wearing my M-17A2 protective mask in its carrier on my right side. It was issued to me by my National Guard unit and I wanted to show the class how the mask functioned.

I used a small bottle of motor oil to simulate blister agents and the students knew that blister agents not too toxic and also not very volatile. I took the cap off the bottle carefully wearing rubber gloves and drew some of the air from the bottle through one of my rigged sample tubes. I placed the cap back on the bottle and then added the water to the test tube and it came up with a positive color for mustard agents. The students were really impressed.

Next came the test for deadly nerve agents which I explained were thousands of times more poisonous than the blister agents. I told the students that I was not going to even take the top off of the bottle that contained the nerve agent sample because it was so poisonous. Instead I would just test the area around the bottle cap. I used a small amount of almond extract to simulate the nerve agent because it was the right color and smelled sweet. I tested the air around the stopper with 56 squeezes, all the time talking about how really toxic and deadly this material really was. I told and not to worry because the stopper was designed to keep the material inside and I might not even get a positive test with the bottle closed. But, I said, "the test is very, very sensitive."

Next I added a drop of water and the test tube turned brown, a positive indication for a nerve agent. At this point some of the students looked a little bored, but this soon changed. Somehow, the tube of simulated nerve agent slipped off the table and hit the floor breaking open. I took advantage of the situation to demonstrate the use of my other equipment. I ripped open my protective mask carrier, donned the mask, and charged the DS-2 dispenser. I had set everything up by the classroom door and was going to spray water on the broken bottle of simulated nerve agent, but I did not really get a chance.

A couple of Cadets were overcome by panic and headed for the classroom windows. They went through them in a flash and dropped to the ground below. Everyone else quickly followed the first two going out

the windows. It was a sight to behold as 30 kids exited the classroom. And in a matter of seconds I was alone in my protective mask holding a spray bottle.

I took my protective mask off put it back into its carrier, went outside and gathered my students together, and ensured that no one had been hurt during the rapid exit from the classroom. I gave them a quick review of what we had learned and told them that the DS-2 from my dispenser had effectively and completely neutralized any and all chemical agents that had been spilled. Still none of them were willing to go back into the classroom. Finally, the bell rang and I dismissed everyone from outside. They finally built up enough courage to go back in and get their books, but only after I went back in first.

I am really lucky that no one got hurt going out the windows and I never again conducted a simulated test of toxic chemical agents in my classroom. I also never told anyone that the nerve agent was not real. I'm sure that everyone told their parents and probably other faculty members about what happened in my classroom that day. But the idea was so wild and improbable that no one believed them. I never had a parent or another faculty member ask me about the incident or my students going out the windows.



I recently went back to La Sierra to take a picture of my classroom (Room S-1) and the infamous windows. This picture shows the center two panes of windows from the back of room S-1 that rotated open. The Cadets opened these windows and exited the building by dropping to the ground!