



# CHEMICAL WEAPONS IN PERSPECTIVE

BY EVELYN S. MURRAY

Let's back up a bit to some of the early little known incidents about nerve gas and its origin. I have an attorney friend who knew the inventor of nerve gas. He was the late Eduard Kesser, a German pharmacology professor, working in his laboratory during Adolf Hitler's era and experimenting on material to improve anesthesia. He stumbled across the formula for nerve gas.

The German military seized it, began producing nerve gas and storing it in bombs. When it became apparent that the Allies were going to invade, Hitler ordered the nerve gas loaded onto barges and shipped down the Elbe River, west of Hamburg. When some of Hitler's inner circle protested about dangers to Germany, he replied: "That will be the price we will have to pay." As it happened, the Allies captured the nerve gas before it was detonated.

After World War II nerve gas factories were dismantled and taken to Russia along with German scientists. The British, French and Americans also obtained stocks and the knowledge to reproduce them. The British destroyed all except research amounts of nerve gas during the 1950s. As we know, the U.S. stored its captured nerve gas in Germany over much protest by the German government. From time to time the U.S. made promises to remove it, but waited for changes in the German government and left it there. The French and Russians still have quantities, as does the U.S. in many nationwide locations.

There have been many problems and accidents associated with early production of chemical and biological weapons (CBW). In the U.S. more than 3,800 accidents, many involving infections and other incidents too numerous to cover in depth, took place. In the history of CBW lie some sordid stories, most with common denominators: secrecy and in many cases downright deceit. Oliver North's escapades would pale in comparison.

No doubt many of you are better students of the World War I era than I am. My first memory of it was in 1918 when, as a child of seven, I ran with open arms to greet a favorite uncle in his sergeant's uniform as he stepped from a streetcar to the sidewalk near our home in Philadelphia. He was more fortunate than many of his buddies, who were either dead or suffer-

ing from the debilitating effects of having been gassed. U.S. gas casualties were very heavy, but not as bad as those suffered by the Russians, who had nearly a half-million casualties from gas alone, and to this day are dreadfully afraid of a repeat performance. The Soviet Union was one of the first nations to sign and ratify the Geneva Protocol (pledging non-use of gas) in 1928. The U.S., under pressure from the Chemical Corps, the American Chemical Society and veterans' groups, failed to ratify it for decades. It was not until after a long fight by Senator Fullbright's committee that it was finally ratified and signed by President Ford in 1975.

Waste disposal has been a headache at CBW bases. "In the '50s, the twenty-seven square mile Rocky Mountain Arsenal — next to what is now Stapleton International Airport in Denver, Colorado — deposited wastes from production of nerve gas and insecticides in underground reservoirs. By the mid-'50s local farmers began to complain of crop failures and livestock losses which they attributed to pollution from the research plant. . . . approximately two thousand birds were dying annually after drinking from the Arsenal's sewage reservoirs . . . . The Army ignored these complaints until 1959 when the Public Health Service officially placed the blame for pollution on the plant. The Army responded by building a well for wastes two-and-a-half miles underground; in 1966, this well was shut down because of reports that it was triggering earthquakes. Denver had its first earthquake in eighty years a month after the well was put to use, and it experienced 1,500 more during the next five years of operation. A peak was reached in August 1967 when the city had eighty-one earthquakes in thirty-one days. Wastes from the plant are now being stored in an asphalt-lined 'leak-proof' reservoir."

That was written in 1969.\* Since then pollution has continued. Apparently the reservoir was not leak-proof. The water supply of Commerce City, adjoining the Arsenal, was so toxic in 1986 that school children were issued bottled water. The ground surrounding Stapleton Air-

port is still so deeply contaminated that the airport may not expand. Anyone who has been to Stapleton knows what a seriously congested area it is. And the Wildlife Service has posted warnings to hunters not to eat game caught in the Arsenal because it is contaminated. Wild birds still die after landing on the reservoir and tasting this chemical cocktail.

The Army discovered in 1956 that toxic sewage from Pine Bluff Army Arsenal in Arkansas had polluted a stream that ran from the plant to the Arkansas River. Rather than attempting to curb the flow of pollutants, the Army quietly bought up the land adjacent to the river and built a fence to keep livestock away so no one would notice that the stream was polluted.

In March 1968, 6,400 sheep became ill and died. The Army initially denied any responsibility and, only after a year had passed and \$500,000 had been spent on investigation, did they concede that the deaths were due to nerve gas. Apparently a low-flying plane which was spraying nerve gas failed to empty its tanks over the target and unintentionally released twenty pounds of the agent after the craft regained altitude. The gas drifted thirty miles over a low mountain range to the valley where the sheep were. If the wind had changed, Salt Lake City would have died that day.

Some may remember that in July 1969 a group of American soldiers on Okinawa were repainting a stack of chemical warfare bombs. One sprang a leak and the escaping poison injured twenty-four men as well as some children bathing in the surf near the base. The publicity accompanying this incident forced the Pentagon to admit that the U.S. had been secretly storing nerve gas on Okinawa without permission or knowledge of the Japanese government. Dr. Gordon Kilgour, then head of the chemistry department at Portland State University, now a member of the Nerve Gas Task Force, led the fight to keep it out of Oregon. Our fighting group was called People Against Nerve Gas (PANG).

After a long, bitter struggle, PANG gathered approximately 200,000 signatures on petitions demanding that the leaking gas not be sent to Oregon. There was a class-action lawsuit by Oregon citizens, financed by Marie Bosworth, Oregon's "Mother of the Year." She asked me

\* Mrs. Murray does not say who it was written by; presumably herself.

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