

The sea-dumping of US chemical weapons in Okinawa

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[A drop in the ocean: the sea-dumping of chemical weapons in Okinawa](#)

Accounts by U.S. veterans in the accompanying feature of tons of chemical weapons being dumped off Okinawa in autumn 1969 are the first time such revelations have been made public - but in fact they tally entirely with the Pentagon's standard operating procedures at that time.

For almost as long as such weapons have been in existence, there has been a problem of what to do with them when they leaked or were rendered obsolete by new munitions. With incineration generally too dangerous due to the risk of toxic smoke, and burial requiring large tracts of land, the sea has often appeared to the military to be the ideal dumpsite - free, immense and hopefully able to render poisons harmless by diluting them.

Following World War I, the Allied forces dropped stockpiles of captured German blister chemicals - mustard agent and lewisite - into the Mediterranean and the Atlantic Ocean. Then after World War II, the United States staged similar dumps of the Imperial Japanese Army's stocks of some 6,600 tons of munitions - including mustard agent and hydrogen cyanide, a potent asphyxiant. According to records held by the Ministry of the Environment in Tokyo, disposal was at more than 20 sites off Tokyo and Ibaraki and Hiroshima prefectures.

During the Cold War, thanks in part to U.S. President John F. Kennedy's trebling of the U.S. chemical-weapons budget, the production of toxic munitions soared. But with that increase came more pressure to dispose of redundant materials.

To solve this problem the Pentagon turned to Operation CHASE (Cut Holes And Sink 'Em), a project already in existence to dispose of conventional armaments. Hence in 1968, according to publicly available Pentagon records, tons of mustard agent, sarin and VX were loaded into old ships that were scuttled off the U.S. East Coast.

But in the late 1960s, when the American public and nascent green movement became aware of such practices, Congress was called on to put a stop to them. Bowing to this pressure, in 1972, the U.S. Ocean Dumping Act became effective - prohibiting the disposal of chemical weapons at sea.

By this time, according to a 2010 report by researchers from the Chemical and Biological Weapons Nonproliferation Program at the Monterey Institute of International Studies, California, the U.S. military had dumped roughly 300,000 tons of chemical weapons in the world's oceans - most at sites

only roughly recorded or not at all, such as, it seems, the alleged 1969 chemical-weapons dumping off Okinawa.

But just how dangerous was this practice?

The U.S. military had calculated that dumping chemical weapons at sea would put an end to their dangers - but these poisons have repeatedly returned to haunt communities near such dump sites. In Japan alone, as of 2010, there had been more than 820 incidents involving chemical weapons dumped in the postwar period; 400 people have been injured and more than 10 have been killed. Fishermen have borne the brunt of these accidents when their nets have trawled up sunken ordnance.

According to the 2010 Monterey report, the potential risks of sea-dumped chemical weapons depend on the substance in question. While some agents are rendered inert almost immediately, others - such as the nerve agents sarin and VX, two of the substances thought to have been dumped off Okinawa - "are believed to persist for long periods in ocean waters."

Additionally, a 2009 report by the same Monterey institute suggested that lewisite - another of the substances stored on Okinawa and possibly dumped off its coast - can contaminate marine life for decades.

In Europe, for example, lewisite dumped after World War I, was linked to "hazardous levels" of toxins in fish studied in 2005 - more than 80 years later.

Raymond A. Zilinskas, current director of the Nonproliferation Program at the Monterey institute, believes the munitions dumped in the sea near Okinawa pose a low risk to the public, but he is concerned about the possible involvement of mustard agent. "If the material was mustard, the surface would become a hardened complex (when exposed to sea water) that would protect the inner material. This would remain as toxic as when it was first produced," he told *The Japan Times* in an interview this month.

The persistent dangers of mustard agent were highlighted in 2004 when three U.S. Air Force bomb-disposal officers were injured handling a shell containing the toxin that had been dumped at sea in the 1940s or '50s quite close inshore off New Jersey.

On Okinawa during the late 1960s, there were a series of incidents which sparked residents' fears of chemical-weapons leaks. Those included a spate of mass fish deaths and the sickening of about 200 children after they'd been swimming in the sea near Ten Gan Pier.

U.S. authorities have always denied any chemical weapons stockpile of theirs played a role in such incidents. But according to the Monterey institute's 2010 report, "The risks may be higher today than when the dangers of the dumped materiel were first acknowledged because containment failure, due to corrosion, is thought to occur after 50 years."

The alleged Okinawa dump took place 44 years ago - so if the report's estimates are accurate, the 3-meter-long metal tubes sunk from U.S. military vessels may well now be near to failing. Researchers also cite the risk that these weapons could be displaced by dredging, oil exploration or the laying of undersea cables.

Equally worrying for typhoon-prone Okinawa is the danger the munitions will be washed ashore and subsequently handled by unsuspecting beachgoers. The Japanese government has noted three such instances - most recently in Hiroshima in 1997.

In order to prevent such accidents, the public needs to be informed of both the risks these substances pose and where they were dumped. In the 1970s, after the Japanese government published a list of sites near the mainland where wartime munitions were disposed of in the postwar period, the number of accidents fell considerably.

In the case of Okinawa, such precautions require two factors.

First, the U.S. military archives need to be thoroughly searched to ascertain whether the precise site of the 1969 dumping at sea was recorded. More importantly, it will need to be open about the alleged 1969 dump and any other disposals that occurred.

With the risks so high, nothing less than full and immediate U.S. transparency will limit the ongoing dangers posed by what are some of the most deadly substances ever produced by humankind.

Jon Mitchell, Special To *The Japan Times*, July 27, 2013

<http://www.japantimes.co.jp/news/2013/07/27/national/a-drop-in-the-ocean-the-sea-dumping-of-chemical-weapons-in-okinawa/#.UfW5D6xGTFw>

Leak finally led to removal of chemical weapons from Okinawa

1952: The Treaty of San Francisco grants control of Okinawa to the United States. The U.S. sends its first shipment of chemical weapons to Okinawa for possible deployment in the 1950-53 Korean War.

1962-63: The U.S. sends further chemical-weapons shipments to Okinawa.

1969: A leak of chemical weapons at Chibana Ammunition Depot sickens 24 Americans. The U.S. government pledges to remove all stockpiles. Alleged sea-dumping of these materials is carried out near Okinawa. U.S. President Richard Nixon announces the end of chemical-weapons production and pledges to use existing stockpiles only in retaliation.

1971: In what was codenamed Operation Red Hat, Okinawa's chemical-weapons stockpile is shipped to Johnston Island in the North Pacific, which is under U.S. control.

1972: Okinawa reverts to Japanese control. The U.S. Congress bans sea-dumping of chemical weapons.

1977: The U.S. incinerates its stocks of Agent Orange near Johnston Island.

2000: The last load of U.S. chemical weapons taken from Okinawa to Johnston Island during Operation Red Hat is destroyed.

Japan Times, July 27, 2013

<http://www.japantimes.co.jp/news/2013/07/27/national/leak-finally-led-to-removal-of-chemical-weapons-from-okinawa/#.UfW36KxGTFw>

Mongoose near U.S. bases have high PCB levels

Japanese researchers have detected high levels of toxic polychlorinated biphenyls in mongooses found near two U.S. military bases in Okinawa in a recent study.

The team of researchers from Ehime University and Okinawa's Meio University told Kyodo News the source of the pollution was probably transformers or other equipment containing PCBs, and said further studies are necessary, given that nearby residents and other animals could be contaminated as well.

The discovery points to the need for a thorough investigation into how equipment containing PCBs has been and is currently used. U.S. bases in Okinawa are said to have a lot of equipment that still contains PCBs.

The team studied seven mongooses that were either killed on roads or captured for studies on their habitats near U.S. Marine Corps Air Station Futenma and the Makiminato Service Area (Camp Kinser), both on Okinawa Island, in August and September 2008. Their carcasses were preserved for further study.

The researchers found up to 890 nanograms of mono-ortho PCBs, a specific type of PCB with a high toxicity similar to dioxin, per gram of liver fat, and an average of 310 nanograms, both higher than levels reported in mongooses in other parts of Okinawa or in cats, wild boars and raccoons elsewhere in Japan.

Mongooses were chosen for the study because they have a relatively narrow range of movement and are thought to be more likely to reflect local pollution levels, and also because they live close to residential areas in Okinawa.

Kyodo News, August 19, 2013

<http://www.japantimes.co.jp/news/2013/08/19/national/mongooses-near-u-s-bases-have-high-pcb-levels/#.Uhp0l39jbRY>
