

Environmental Contamination at USMC bases on Okinawa

Jon Mitchell

Abstract:

USMC handbooks and reports obtained under the U.S. Freedom of Information Act casts new light on environmental accidents that occurred on three of the USMC’s most important installations on Okinawa: MCAS Futenma, Camp Hansen and Camp Schwab. The earliest report is dated June 2002 and the most recent June 2016. Of the 270 accidents, it appears that only 6 were reported to Japanese authorities - 3 of which because the USMC required the help of local emergency services to clean up. This report examines the environmental contamination resulting from these accidents and the handling of the cases by the USMC authorities.

Since 2002, at least 270 environmental accidents on U.S. Marine Corps bases on Okinawa have contaminated land and local waterways but, until now, almost none of these incidents has been made public. U.S. Marine internal reports highlight serious flaws in training and suggest that the lessons of past accidents have not been effectively implemented. Moreover, recent USMC guidelines order service members not to inform Japanese authorities of accidents deemed “politically sensitive”, raising concerns that many incidents may have gone unreported.



Construction work to remediate land at Nishi-Futenma, Okinawa

Catalogued in 403 pages of USMC handbooks and reports obtained under the U.S. Freedom of Information Act, the accidents occurred on three of the USMC’s most important installations on Okinawa: MCAS Futenma, Camp Hansen and Camp Schwab. The earliest report is dated June 2002 and the most recent June 2016.

Although the original FOIA request sought documents from 1995 to 2016, only three reports were released for the period between 1995 and 2005. Likewise, no reports for Camp Schwab were released for the years 2008 and 2010, nor were there any documents related to the crash of an HH-60 Pave Hawk helicopter on Camp Hansen in August 2013. At the time, the crash caused a public outcry because it occurred near a dam and dangerous levels of arsenic were later discovered in the vicinity.¹

According to the documents that were released, between 2005 and 2016 MCAS Futenma experienced 156 accidents resulting

in the release of 14,003 liters of fuels (including jet fuels and diesel). Between 2004 and 2016, Camp Hansen experienced 71 accidents, including the leak of 2596 liters of fuels and other substances such as 678 liters of antifreeze. Between 2002 and 2016, Camp Schwab experienced 43 incidents, involving 2628 liters of fuel; in 2002, there was a 4024-liter spill of mixed water/POL (Petroleum, Oils And Lubricants) - one of the largest of the recorded accidents.

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Environmental accident handbooks from 2013 and 2015 reveal that USMC staff are under orders not to inform Japanese officials of “non-emergency and/or politically sensitive incidents.” Only when an accident is deemed an emergency that poses a threat to people, drinking water or the environment off base, are marine staff permitted to notify Japanese authorities. The decision whether to classify an incident as “politically sensitive” is left in the hands of the USMC.

On October 28, Defense Minister Inada Tomomi, said she would seek clarification on the policy from the U.S. military and she would press them to report spills promptly to local authorities.² At the time of publication of this article, the government of Japan had made no updates on the issue.

U.S. Forces Japan spokesman Maj. John Severns defended the policy: “The decision to notify ODB (Okinawa Defense Bureau) is made by USFJ in accordance with Joint Committee agreements,” Severns wrote by email. “These agreements with the Government of Japan describe what situations require notification.”

Even when the USMC decides to report incidents to the Japanese authorities, the FOIA-released documents reveal discrepancies about

what is told Tokyo.

In June, 2016 an accident on MCAS Futenma resulted in the spill of 6908 liters of aviation fuel. The internal accident report suggests the accident was due to human error, however Japanese authorities were informed it occurred because of a “valve misalignment.”

Moreover, although USFJ told Japanese authorities the spill had been dealt with “immediately”, the documents reveal it wasn’t fully under control until the following day. USFJ did not inform the Japanese government of the scale of the incident, which ultimately necessitated the disposal of 11 208-liter drums of contaminated earth and 3028 liters of contaminated water.

After the accident, an inside source slammed the safety standards of the USMC at Futenma. The expert explained that the cause of the accident was marines overriding a safety solenoid with a plastic tie.





Photo from an inside source reveals the solenoid bypass which led to the June 2016 leak

“Such accidents are typical of the U.S. Marines. To put it bluntly, their work is lazy and they act stupidly,” he says.

The expert, who has been working for more than 10 years on U.S. installations in Japan, provided a 12-second [video](#) of the spill. Large volumes of fuel can be seen pouring out of a vent in the side of the grass-covered storage tank, pooling on the ground and running into a storm drain.

In March 2009, a similar accident had occurred at the same fuel tank. That incident involved fuel initially estimated by the marines at 3,028 liters but later revised down to 757 liters. The fact that the accident was allowed to happen highlights serious flaws in the training of marines, says the insider.

He also expressed grave concerns about what would happen if a fire broke out in MCAS Futenma’s fuel storage areas. The installation, he says, is not adequately equipped to deal with such a conflagration and the fire-fighting capabilities at MCAS Futenma are “very poor.”

Severns said he was unable to “respond to vague and unsourced comments.”

Although the June spill apparently did not escape the base, other incidents did.

Among the accidents which polluted off-base communities but went unreported to the Japanese government was a 946-liter diesel spill at Camp Schwab in September 2005 caused by contractors who accidentally severed a fuel line during construction work. The spill, unnoticed for four days, contaminated 120 meters of river with diesel, which in some stretches lay 5cm deep upon the water’s surface.

On-base rivers flow into the nearby bay, an area categorized as the highest priority by Okinawa Prefecture in its list of places requiring environmental protection.

On Camp Hansen in November 2008, a marine hosed down a heavy equipment parking area, washing an estimated 4 liters of “unknown POLs” (pollutants) into drains which then flowed “off base close to the Japanese elementary school.”

On Camp Hansen, in May 2010, 606 liters of antifreeze spilled at a motor pool resulting in an unknown amount flowing into the ocean.

Among the incidents at MCAS Futenma, three spilled a total of 2669 liters of Aqueous Film Forming Foam (AFFF). One incident in 2007 leaked 757 liters of which 189 liters went off the base “into a short creek, then immediately into a cave.”

Hydraulic fluid spills within MCAS Futenma

totaled 405 liters.

Both AFFF and hydraulic fluid can contain perfluorooctanesulfonic acid (PFOS), a substance linked to cancer, damage to the immune system and harm to fetuses and infants. Recent reports in the U.S. media have revealed that the military may have been aware of the dangers of PFOS since 1979 and in 2006, the U.S. Environmental Protection Agency warned it might be carcinogenic.³ Tests for PFOS contamination have been conducted on military installations throughout the States and U.S. Army Garrison in Ansbach, Germany. In May, the EPA set its drinking water health advisory limit for PFOS at 70 nanograms per liter.⁴

In February, at a spring near MCAS Futenma, PFOS levels of 80 nanograms per liter were recorded.⁵ Near Kadena Air Base, local checks on the Dakujaku River have discovered levels of PFOS as high as 1320 nanograms per liter and, at Chatan Water Purification Plant, 80 nanograms per liter.⁶

USFJ says there are no plans for the military to conduct checks for PFOS on Okinawa.

In April, a previous investigation revealed the damage that Kadena Air Base, the largest USAF installation in Asia, has been causing the island's drinking water supplies. Between 1998 and 2015, there were at least 415 accidents, only a fraction of which were reported to the Japanese government.⁷

When the investigation was published, the Japanese government made no public comment. However USFJ emails obtained under the FOIA show that the coverage prompted the MOD and MOFA to demand the U.S. military hand over the 8700-plus pages of documents upon which the articles had been based.

The latest release of papers related to Futenma, Schwab and Hansen suggest lax safety standards have caused many of the

incidents.

In June 2002, a spill involving 4024 liters of mixed POL and water occurred at Camp Schwab's bilge water treatment facility. The follow-up investigation slammed supervising officers for failing to monitor the marines' work and, after the accident was discovered, for pretending not to know what had happened. The marines, according to the report, were responsible for the "release of a known hazardous material onto areas that feed public waterways."

Subsequent incidents suggest the USMC failed to improve training procedures at Camp Schwab.

An April 2009 report describes how a marine, untrained to operate the vehicle he was driving, caused an accident which spilled hydraulic fluid along 200 meters of on-base road and into the ocean. Members of the Okinawa Defense Bureau witnessed the accident but apparently did not notify the Japanese government.

More recently, in May, 1060 litres of fuel spilled within a storage area on Camp Schwab. Investigators linked the accident to environmental officers' failure to provide the marines in their charge with necessary training.

Perhaps more worryingly are comments contained in a June 2009 investigation revealing serious flaws in the base's oil water separators (OWS). A key component of the environmental protection infrastructure of airports, factories and military bases, OWS prevents substances such as fuels and solvents from leaking into the environment. The 2009 report blamed a leak of fuel into the sea on the failure of Schwab's OWS and stated that they "do not work" in heavy rain. If accurate, the assessment raises serious concerns for the installation particularly given the propensity for torrential precipitation in the Yambaru jungles

where Schwab is situated.

U.S. Forces Japan denied that the problem could damage the local environment. "It is a known characteristic of oil-water separators that they are less effective during heavy rainfall," Severns wrote. "Our engineers are aware of this and take it into account when designing our remediation systems."

Other reports reveal the careless storage of chemicals on Camp Hansen. One incident in December 2011 involved 7 kg of calcium hypochlorite bleach powder transported to Okinawa following joint U.S.-Australia war games. Sloppily stored in a shipping container, some of the chemicals began to react with the air, injuring a marine who opened the container's door.

Despite the injury and the fact that the container's paperwork had not been filled out, the USMC supervisor failed to report the incident. One month later, after superior officers were finally notified, the base declared the situation an emergency and called in a Hazmat team from the local Japanese fire department to clean up the spill site. The empty shipping container was subsequently transported to USMC Camp Kinser, Urasoe City.

Recently Camp Kinser has been at the focus of environmental concerns. In the 1970s, the base, then run by the U.S. Army and known as Machinato - or Makiminato - Service Area, contained an outdoor storage yard for chemicals returned from the Vietnam War. According to military reports, these substances, including herbicides and solvents, contaminated the soil with heavy metals and the pesticide chlordane, which seeped into the sea, killing large numbers of fish.⁸

Last year, tests conducted by Urasoe City on a river adjacent to Camp Kinser found sediment contaminated with the same toxins, suggesting that the base continues to suffer from serious

contamination. Likewise, wildlife caught near the base has repeatedly been found to contain high levels of pollution.⁹

USFJ refuses to make public current on-base environmental data for Camp Kinser.

Contamination at MCAS Futenma has also alarmed local residents. In the early 1980s, the USMC discovered elevated chemical readings in storm water flowing from the base. When maintenance crews investigated, they discovered more than 100 barrels of unknown chemicals, some painted with the tell tale orange stripes of U.S. military defoliants. Following the discovery, senior officers ordered the clandestine removal of the barrels for disposal elsewhere. In 2015, Lt. Col. Kris Roberts, the marine in charge of the crew that discovered the barrels, was awarded compensation by the U.S. government for exposure to toxic chemicals.¹⁰

MCAS Futenma. Located smack-dab in the middle of Ginowan City, Okinawa's most controversial base - often dubbed the most dangerous in the world - is surrounded by homes, schools and hospitals. In 1996, to placate public fury following the gang rape of a 12-year old girl by three service members from Camp Hansen, Washington and Tokyo agreed to close MCAS Futenma. But that plan has stalled due to insistence that USMC operations be moved to a new base near Camp Schwab - a decision opposed by the Okinawan government and the majority of Okinawans. In 2004, the crash of a USMC helicopter into the neighboring Okinawa International University only increased demands for MCAS Futenma's closure.

Size: 4.8 sq km (including a 2.8km runway)
 Land-owners: 3,818

Japanese base workers: 208 U.S. service members: Classified

USMC Camp Schwab. Named after Battle of Okinawa hero, Albert E. Schwab, and built upon a former civilian internment camp, the remains of approximately 300 Okinawans still lie within the base. During the Cold War, the installation and its adjacent arsenal, stored nuclear warheads and, veterans say, a large cache of Agent Orange. Today live fire training and sea drills are held here. The proposed site for operations relocated from MCAS Futenma, the USMC envisages a new base with twin runways and a deepwater port. The Japanese government contends the environmental impact will be minimal but many Okinawans - Governor Takeshi Onaga included - argue that the millions of tons of landfill will cause irrevocable damage to the sea.

Size: 20.6 sq km Landowners: 752

Japanese base workers: 242 US service members: Classified

USMC Camp Hansen. Home to the sprawling Central Training Area and the largest live fire land range on Okinawa, the base has been a constant cause of concern for local residents due to forest conflagrations and stray rounds. Until 1997, exercises fired ordinance over Prefectural Route 104 where a much-photographed sign warned drivers to be careful of overhead projectiles. In 2013, a helicopter crashed within the base near a dam but local government officials were denied access to check for contamination.

Size: 51.1 sq km Land-owners: 3169

Japanese base workers: 576 US service members: Classified

Jon Mitchell is an *Asia-Pacific Journal* editor, author and investigative journalist with *The Okinawa Times*. He is the author of *Poisoning the Pacific: The U.S. Military's Secret Dumping of Plutonium, Chemical Weapons, and Agent Orange* and other books.

Notes

¹ "High levels of arsenic found at Okinawa chopper crash site," Japan Times, February 18, 2014. Available [here](#).

² Comments were reported by The Okinawa Times - 緊急通報手順 米側に照会中 - on October 29, 2016.

³ "Air Force studies dating back decades show danger of foam that contaminated Colorado Springs-area water," The Gazette, October 23, 2016. Available [here](#).

⁴ "Drinking Water Health Advisories for PFOA and PFOS," Environmental Protection Agency. Available [here](#).

⁵ For example, see 普天間飛行場周辺でもPFOS検出 沖縄県が調査, Okinawa Times, February 25, 2016. Available [here](#).

⁶ Jon Mitchell, "FOIA Documents: Drunk US Marine's 2015 dump of toxic foam among accidents polluting Okinawa water supply", The Asia-Pacific Journal, Vol. 14, Issue 7, No. 3, April 1, 2016. Available [here](#).

⁷ Jon Mitchell, "Contamination at Largest US Air Force Base in Asia: Kadena, Okinawa", The

Asia-Pacific Journal, Vol. 14, Issue 9, No. 1, May 1, 2016. Available [here](#).

⁸ Jon Mitchell, "FOIA Documents Reveal Agent Orange Dioxin, Toxic Dumps, Fish Kills on Okinawa Base. Two Veterans Win Compensation, Many More Denied", The Asia-Pacific Journal, Vol. 13, Issue 39, No. 1, October 5, 2015. Available [here](#).

⁹ See for example ハブから再びPCB キンザー周辺 DDT類も検出, Ryukyu Shimpo, January 21, 2017. Available [here](#).

¹⁰ Mitchell, October 5, 2015.