

## Okinawa Dumpsite Offers Proof of Agent Orange: Experts Say 沖縄ゴミ捨て場から枯れ葉剤・エージェント・オレンジ検出 専門家主張

**Jon Mitchell**

A Japanese translation of this article is available [here](#)

Two leading Agent Orange specialists have weighed in on the recent discovery of 22 barrels buried on former military land in Okinawa City.<sup>1</sup> Richard Clapp, professor emeritus at Boston University School of Public Health, and Wayne Dwernychuk, the scientist previously in charge of identifying defoliant contamination in southeast Asia, likened the levels of dioxin contamination in Okinawa City to dangerous hot-spots in Vietnam where the U.S. military had stored toxic defoliants during the 1960s and '70s.<sup>2</sup>

Both scientists cited the risks to Okinawa residents and urged immediate clean-up of the land to limit the threat to human health. Dwernychuk also noted that the discovery of the barrels may disprove the Pentagon's repeated denials that military defoliants were ever present on Okinawa.

The scientists' comments came in response to the July 31 release of independent tests undertaken at the request of Okinawa City by Ehime University - one of Japan's top institutes for dioxin testing. The study revealed that all 22 barrels found beneath the soccer pitch in Okinawa City contained traces of the herbicide, 2,4,5-trichlorophenoxyacetic acid (2,4,5-T), and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), the most lethal form of dioxin. One barrel contained dioxin levels 840% the safe standard, while samples of water taken near the barrels

revealed levels 280 times legal limits. Both 2,4,5-T and TCDD are two of the substances found in Agent Orange and other Vietnam War era defoliants. At least three of the barrels were labeled with markings from Dow Chemical Company - one of the primary manufacturers of Agent Orange.



**Workers unearth the barrels discovered beneath a soccer pitch in Okinawa, City.**



**The soccer pitch in Okinawa City where the 22 barrels were unearthed.**

Clapp stated, “The Okinawa data, if accurate, are comparable to recent hot spot data collected in Vietnam. About half of the dioxin levels are above what (scientists) consider significant contamination.”

This assessment was supported by Dwernychuk, who, as chief scientist with the Canadian firm, Hatfield Consultants, pinpointed more than 20 potential dioxin hot-spots in Vietnam. “If some of the levels seen in the Okinawa sample data sheet for TCDD were found in the environment of Vietnam, recommendations would be presented for immediate remediation, with attention being paid to potential exposure pathways to local populations,” Dwernychuk told The Japan Times.

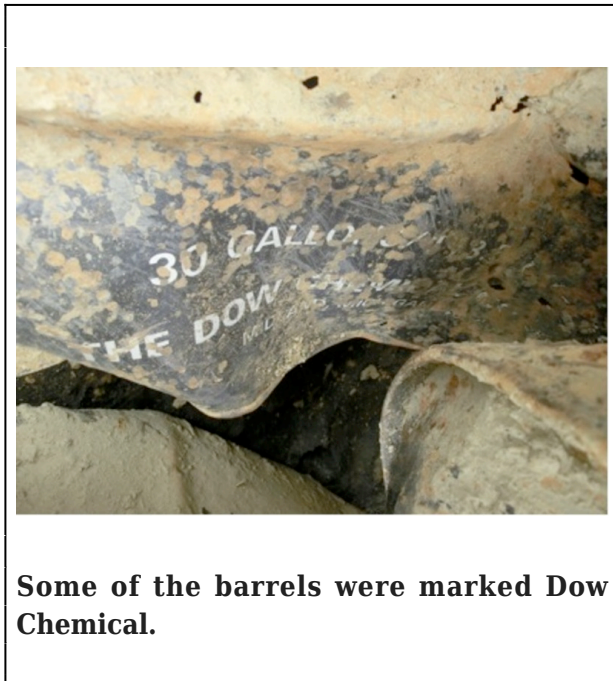


**The discovery made headlines in Okinawa, including the Ryukyu Shimpo newspaper.**

Medical experts have long contended that these hotspots in Vietnam have plagued local residents with serious illnesses including cancers and birth defects. The Vietnamese Red Cross estimates that 3 million people today suffer from dioxin poisoning related to U.S. usage of defoliants between 1961 and 1971. Many were exposed to dioxin that had entered the local environment and made its way into the food chain.

Debate over the exact contents of the Okinawa barrels has been fierce since their discovery in June on land that was formerly part of Kadena Air Base and returned to civilian usage in 1987. Almost immediately after workers unearthed the barrels, a Dow Chemical spokesperson told journalists that the type and markings on the containers were inconsistent with the way it

shipped defoliants.<sup>3</sup>



Meanwhile, an Okinawa Defense Bureau spokesperson told The Japan Times last week that the possibility that they contained defoliants was slim.<sup>4</sup> The ODB stressed the fact that it failed to find traces of one of the other ingredients of Agent Orange, 2,4-Dichlorophenoxyacetic acid (2,4-D). However it neglected to mention that 2,4-D is biodegradable and so would have broken down in the years since the barrels had been buried - rendering detection likely impossible.

Further suspicions that the authorities are attempting to downplay the possibility the barrels contained defoliants were raised when the ODB did not announce the discovery of TCDD during its press conference on July 24. It only revealed its presence after questions by Okinawa journalists.

In comparison to the ODB report which minimized the chance of the barrels containing Agent Orange, last week's Ehime University report concludes that the barrels "did not only contain herbicides, there is a possibility that defoliants were included, too."

表 1.3 ダイオキシン類分析結果

ドラム缶 内容物	ダイオキシン類 (pg-TEQ/g)	ドラム缶 内容物	ダイオキシン類 (pg-TEQ/g)
No. 1	370	No. 12	76
No. 2	900	No. 13	410
No. 3	1100	No. 14	170
No. 4	81	No. 15	220
No. 5	8400	No. 16	530
No. 6	920	No. 17	930
No. 7	180	No. 18	510
No. 8	240	No. 19	150
No. 9	150	No. 20	710
No. 10	890	No. 21	360
No. 11	250	No. 22	300

環境基準: 1000pg-TEQ/g

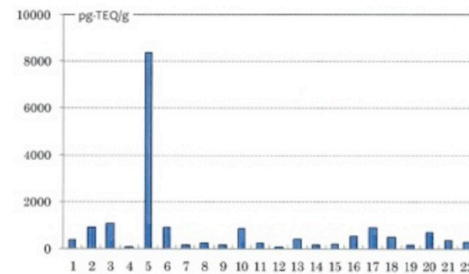


図 1.1 ダイオキシン類分析結果

**Data from Ehime University shows the numbered barrels (#1~#22) and their dioxin content. Barrel #5 spiked at 840% the safe standard.**

During the Vietnam War, Kadena Air Base was one of the Pentagon's primary transport hubs for the conflict. Earlier this year, it was revealed that a 1970 U.S. Army report on Agent Orange cited the presence of a "Herbicide stockpile" at Kadena.<sup>5</sup> More than 150 U.S. service members claim to be sick from exposure to Agent Orange on Okinawa - some of whom allege they sprayed the defoliant on Kadena Air Base to kill vegetation near perimeter fences and the installation's runways. Veterans also claim that large quantities of Agent Orange were buried on Okinawa during the 1960s and '70s - including on Kadena Air Base.<sup>6</sup>

The Pentagon vehemently denies that it ever stored military defoliants - including Agent Orange - on Okinawa. In February, it released a 29-page report denying that such substances



were ever on the island.<sup>7</sup>

"I would venture to say these data (from Ehime University), and the presence of substantial levels of TCDD in the barrels, thoroughly negates the Pentagon report repudiating the presence of Agent Orange and other herbicides on Okinawa," commented Dwernychuk.

He dismissed the Department of Defense denials as a question of semantics. "Continued denials of the presence of Agent Orange are of little consequence given that the principle component of concern, TCDD, was present."

Dwernychuk urged local authorities to mitigate the risk to people living in the area. "Removal of the barrels and contaminated soils should be a priority. Ground water studies should be undertaken to determine if there has been any transport of TCDD to other areas - facilitating human exposure."

Directly adjacent to the barrels' dumpsite - on the other side of the fence - within Kadena Air Base, there are two Department of Defense schools - Bob Hope Primary School and Amelia Earhart Intermediate School. Inquiries to both the Pentagon and United States Forces Japan as to whether dioxin checks would be conducted there were unanswered at the time of publication.



**In this aerial view, the soccer pitch (bottom right) is seen separated by an**

**elevated highway from the two DoD school within Kadena Air Base - Bob Hope Primary School and Amelia Earhart Intermediate School.**

Until now, only a small fraction of the Okinawa City soccer pitch has been surveyed. The municipality has announced that it will conduct further tests to discover whether any more barrels lie buried beneath the field.

*Recommended citation: Jon Mitchell, "Okinawa Dumpsite Offers Proof of Agent Orange: Experts Say," The Asia-Pacific Journal, Issue 38, No. 1, September 23, 2013.*

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## Notes

<sup>1</sup> For an account from The Japan Times of the initial discovery of the barrels, see [here](#).

<sup>2</sup> There is background on Vietnam dioxin hot-spots [here](#).

<sup>3</sup> Even before the results of the tests came in, Dow Chemical Co. was quick to distance itself from the discovery. Its denials were run by Stars & Stripes in an article titled 'Barrels found on Okinawa did not contain Agent Orange, Dow Chemical says' on June 28. The full text can be read [here](#).

<sup>4</sup> Those comments can be read [here](#).

<sup>5</sup> See: Jon Mitchell, "Herbicide Stockpile at Kadena Air Base, Okinawa: 1971 U.S. Army report on Agent Orange," The Asia-Pacific Journal, Vol 11, Issue 1, No. 5, January 14, 2013. Available [here](#).

<sup>6</sup> For a discussion of a similar burial at MCAS Futenma, see: Jon Mitchell, "Agent Orange at Okinawa's Futenma Base in 1980s," The Asia-Pacific Journal, Vol 10, Issue 25, No. 3, June 18, 2012. Available [here](#).

<sup>7</sup> The full text of the 29-page report is available [here](#). For a discussion of its main flaws, see: Jon Mitchell, "'Deny, deny until all the veterans die' - Pentagon investigation into Agent Orange on Okinawa," The Asia-Pacific Journal, Vol. 11, Issue 23, No. 2. June 10, 2013. Available [here](#).