

Issues regarding Kadena Air Station and PFOS and Other Chemical Substances (PFOA, PFHxS) in Okinawa Prefecture, Japan

Okinawa Prefectural Government

Introduction

The Okinawa Prefectural Government (the OPG), in its role as a regional government, has conducted surveys of PFOS to understand more about the presence of these substances in the prefecture's environment. The surveys also found chemical substances that are related to PFOS like PFOA and PFHxS.

During these surveys, PFOS and related chemical substances were detected in several places in the prefecture, and high concentrations of PFOS and other chemical substances (PFOA and PFHxS) exceeding the national provisional standard value of 50ng/L were found around the US military bases, including Kadena Air Station.

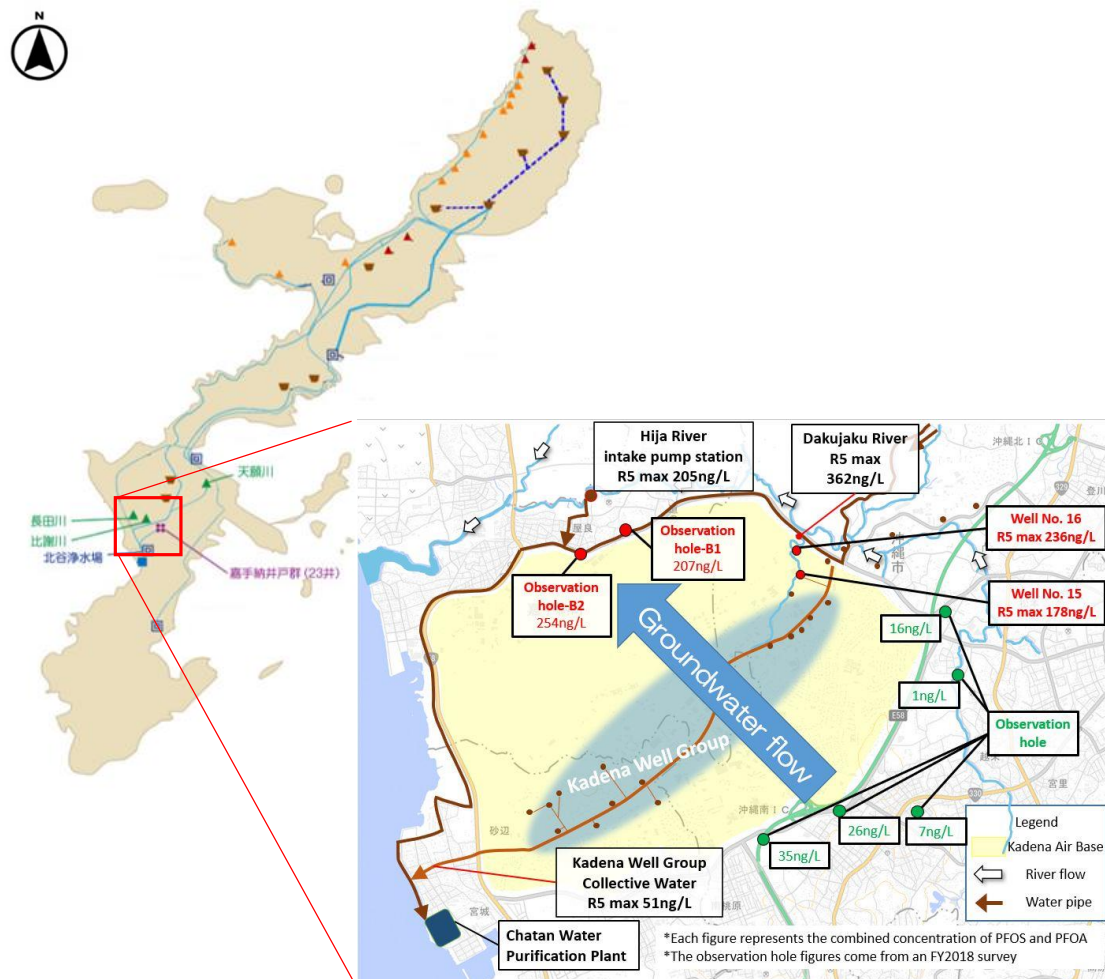
The OPG has applied to the US military for permission to conduct an on-site survey at Kadena Air Station to identify the source of contamination, and has requested the Japanese government to work with the US to provide the OPG with access to the base for a survey, but permission has not been granted to date, which has caused great anxiety among local residents.

1. Survey and Detection Status of PFOS and other Chemical Substances (PFOS, PFOA) in Rivers and other Places around Kadena Air Station

Since February 2015, the Okinawa Prefectural Enterprise Bureau (OPEB), a local public enterprise of the OPG that operates businesses providing drinking water and water supplies for industrial usage, has been monitoring PFOS and PFOA in the water sources for the Chatan Water Treatment Plant (Hija River, Nagata River, Tengan River, and Kadena Well Group) in the areas around Kadena Air Station.

The monitoring results have confirmed that there are high concentrations of PFOS and other chemical substances (with readings of 608ng/L and 143ng/L) in the Hija River and Kadena Well Group in the areas around the base. The monitoring also confirmed that there are high concentrations of PFOS and other chemical substances (with a reading of 1,675ng/L) in the Dakujaku River, which flows from Kadena Air Station into the Hija River. These findings confirm that the contamination of the water near the base is a major obstacle to the stable supply of safe tap water.

The Kadena Well Group consists of 23 wells inside and outside of Kadena Air Station. Currently the water intake from the wells with high PFOS concentrations has been suspended, and the minimum amount of water that is required for the maintenance and management of the facility is being taken from wells with low concentrations. However, during a drought in 2024, the prefecture's dam water storage rate decreased, and water intake from wells with high concentrations of PFOS and other substances had to be temporarily resumed.



2. Groundwater Survey in the Areas around Kadena Air Station

In June 2016, the OPG submitted an application to the US military requesting permission to enter Kadena Air Station to conduct a survey for the cause of the PFOS contamination. However, the US military has not granted that permission. As an alternative approach, from 2017 to 2018, the OPG installed observation holes in the areas around the Kadena Air Station to survey the flow direction of the groundwater and the extent of PFOS contamination in the area.

The observation holes confirmed that the groundwater around the base flows from the southeast to the northwest, with Kadena Air Base at the center. As a result, the PFOS concentration in the groundwater upstream is low, and the PFOS concentration downstream is high, and then flows into the Hija River. On the other hand, high PFOS concentrations were not found in the water flowing in from the north side of the Hija River outside the base.

In May 2020, the OPG submitted another application for permission to enter Kadena Air Station to conduct a survey, but no response has been received as of March 2025.

3. Former Firefighting Training Site Reportedly Located within Kadena Air Station

In August 2020, it was reported by a local newspaper that training using foam firefighting agents containing PFOS was regularly conducted from the 1970s to the 1980s at a firefighting training site that was formerly located within Kadena Air Station.

The local newspaper that reported the story also obtained documents through the US Freedom of Information Act which noted that the terrain of the former training site allowed the water to flow towards the Dakujaku River and nearby wells.

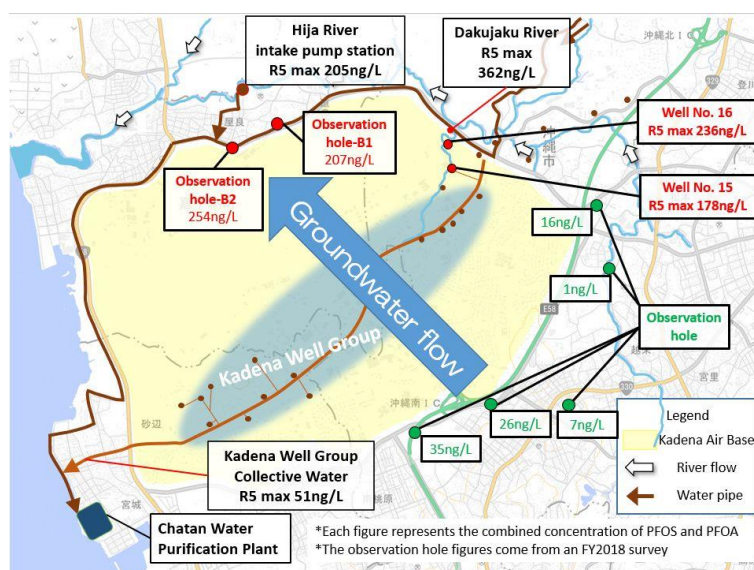
4. Measures to Reduce PFOS and other Chemical Substances at Water Treatment Plant

The OPEB uses the groundwater and rivers inside and outside Kadena Air Station as sources for its water supply, and is expected to spend more than 1 billion yen per year on measures to reduce the amount of PFOS and other chemical substances in the water. The measures will include replacing a high-performance granular activated carbon (GAC) water treatment system and operating a seawater desalination facility at their water treatment plant.

5. Summary of Surveys and other Actions conducted by the Public Enterprise Bureau

Surveys did not detect high concentrations of PFOS in the groundwater upstream of Kadena Air Station, but high concentrations of PFOS have been detected in the wells within the Base and in the Dakujaku River that flows through the Base, and in the groundwater downstream.

In addition, considering that the PFOS concentrations in the mainstream of the Hija River increase after the Dakujaku River flows into the river, it is highly likely that the source of contamination is within Kadena Air Station.



Conclusion

Up to now, the OPG has requested the Japanese government to allow it to conduct on-site investigations at the US military bases in Okinawa. However, the Japan-US Status of Forces Agreement and the Environmental Supplementary Agreement, both of which leave discretionary authority to the U.S. military, have been obstacles to this request. As a result, the OPG has not been permitted entry to the base, making it impossible to identify the source of contamination.

The groundwater in the Kadena area is one of the most precious water resources for Okinawans, but this is not the first time that it has been contaminated as a result of the operations at Kadena Air Base. In 1967, a jet fuel spill at Kadena Airfield contaminated the wells in the area. At the time, the wells smelled of oil and were called ‘burning wells’ because the well water burned when the wells were set on fire.

Since the reversion of Okinawa to Japan in 1972, the water sources around Kadena Air Base have been used to supply tap water for both local residents and U.S. military personnel and their families. Currently, the OPEB is minimizing the amount of groundwater that it sources from the wells with high concentrations of PFOS and other chemicals. However, during times of drought, it becomes necessary to increase the amount of groundwater to take from the wells. In such cases, while the supplied tap water will still comply with Japan's provisional target value of a total concentration of 50 ng/L, it may exceed the Maximum Contaminant Level (MCL) of 4 ng/L for PFOS and PFOA each, as set by the U.S. Environmental Protection Agency in April 2024.

“Water and Sanitation” is one of the 17 goals of the UN’s SDGs, and the “Right to Obtain Water” is recognized as a basic human right under international law.

The issue of water for Okinawans is a human rights and cultural issue, and it is our right to thoroughly investigate the causes of PFOS and other chemical substances. However, the situation is such that it is difficult to guarantee the right of the prefecture's residents to water.

We hope that the UN will also urge both the Japanese and US governments to implement measures such as a fundamental review of the Japan-US Status of Forces Agreement, permit the OPG to conduct the on-site inspections of bases, and implement measures against PFOS contamination, in order to resolve the issues of PFOS and other substances in Okinawa Prefecture. We hope that you will support the Okinawa Prefectural Government’s efforts regarding these issues in the future.