

HONOLULU

HAWAII'S NEAREST NEIGHBOR

Johnston Island is a storage site for deadly nerve gas. It's also home for 300 people

By Victor Lipman



Hawaii's nearest neighbor is an unusual place. Located 717 miles southwest of Honolulu and 460 miles south of French Frigate Shoals, Johnston Atoll is the island group closest to Hawaii. It consists of four islands, the largest of which is Johnston Island, 2 miles long, half a mile wide, and shaped much like an enormous aircraft carrier. Right now Johnston Island has about 300 people living on it; in two years its population is expected to double.

Part of Johnston Island is contaminated with plutonium, the result of three nuclear missile test accidents which occurred in 1962. Part of the

island is contaminated with dioxin, the toxic component of some Agent Orange that was spilled there in the late 1970s. And a large part of the island—41 acres—now houses enough nerve gas to kill every person on the island thousands of times over.

Yet in this unlikely atmosphere, a community thrives. Johnston Island has a daily newspaper (*The Breeze*), a health- and fitness-conscious population, superb cafeteria-style food and even softball leagues (see accompanying story, page 50). Indeed, one person who has lived there most of the last five years calls it "as close to a utopia as you're going to get on

this earth."

The story of Johnston Island today is really the story of the chemical weapons that are stored there, and what is being done with them. But to understand how the weapons got there, it's helpful to review briefly the island's history.

Johnston Island was discovered on Sept. 2, 1796, by the American brig *Sally*. No landing was made, however, and it wasn't until 1807 that Capt. Charles James Johnston of HMS *Cornwallis* visited the atoll, which is now named for him. He



Opposite page: Part of Johnston Island is contaminated with plutonium from nuclear weapons test accidents in 1962.

Top: An aerial view of Johnston Island.

Above: A view of Johnston Island's port facility.

AN UNLIKELY UTOPIA

Gloria Muller went to Johnston Island because of an ad in the newspaper. It was for a job as an accountant for Holmes & Narver, a company on government contract that maintains the military facilities there. Muller didn't know much about Johnston, but she was told about the island's nerve gas situations. "Personnel told me what was stored there," she recalls. "It was a little spooky at first, thinking about it. But I figured I'd go down and check it out. I never worry about it now. After the first couple of weeks it's no big thing. It's part of life and you don't even think about it."

Muller, 33, has recently transferred back to Holmes & Narver's Hawaii office after five years at Johnston Island; she now returns to Johnston several times a year. When she first arrived at Johnston in 1979, she was one of only three women among more than 300 men. * Today there are about 18 women there. "Guys probably think, 'Oh, the women have it made,'" Muller says, "but it's very rough. They feel like they have to take care of you and do everything for you. You're in the spotlight constantly. It's a fishbowl. Everybody knows who you are, but you may not know who they are."

Johnston Island is 2 miles long and half a mile wide. It used to be much smaller (60 acres in 1942, compared to 625 acres today), but it's been enlarged over the years by dredging, thus providing more space for military operations, first in World War II and later in the nuclear testing era. In fact, two entire small islands—Akau and Hikina—have been created, thus making Johnston a four-island atoll instead of a two-island atoll. All the islands are off-limits to the general public. The ground is hard-packed coral. The climate is similar to Waikiki's, and brisk tradewinds blow steadily. The nerve gas is located in an area called Red Hat, which under normal wind conditions is downwind from where people live, a safety precaution in case of chemical leakage.

What is there to do on Johnston Island? There's an open-air movie theatre, and a 30-foot antenna (that came in pieces and was assembled by Johnston residents) brings in live via satellite a cable TV channel. But according to Gloria Muller, the main pastimes are really sports, sports and more sports. "There's plenty to do," she says. "You name it and the recreation service is provided. There's a six-lane bowling alley with leagues. There's a running club, a walking



club, a biking club. There's a full gym with basketball and volleyball. There's every water sport you could think of: waterskiing, Sunfish, Hobie Cats, fishing." On the same day as last year's Honolulu marathon, two Johnston Island residents ran their own marathon, circling the island numerous times. There's also a softball field and a five-team league. One of the teams is named the "Master Batters."

Another nickname belongs to the chemical munitions specialists who are part of the Army's 267th Chemical Company. These are the men who do the day-to-day, hands-on work with the nerve gas. They are called the "Decon Dawgs"—"decon" being short for decontamination. In Johnston Island argot, if a Dawg runs into any problems with chemical leakage, it is said he got "bit."

Housing accommodations at Johnston Island are spartan. Like many others there, Muller lived in a single large room separated from others in a barracks-like setting by a partition. Since the partition didn't reach the ceiling, privacy was limited. But if housing is austere, the cafeteria-style food is generally regarded as excellent. "The supervisor at the dining hall is fantastic," Muller says. "You mention something you'd like, and a week later it's on the menu."

Despite nuclear tests there in the 1950s and '60s and nerve gas storage there today, Johnston Atoll is still a National Wildlife Refuge. About a dozen species of seabirds nest there regularly, including sooty terns, boobies, shearwaters and frigatebirds—and green sea turtles and humpback whales have also been observed. The Army is now planning to build a demilitarization plant on Johnston Island to destroy unwanted chemical weapons (see main story). There is concern that if the building and operating of this

plant increase the island's population too much, it could jeopardize the habitat of some of the atoll's wildlife. But Rob Shallenberger, refuge manager for the U.S. Fish & Wildlife Service, says the Army has been cooperative in this regard, preparing a lengthy Environmental Impact Statement and studying the wildlife situation carefully. "They're very understanding of our concerns," he says.

In fact, environmentalists have gone so far as to call Johnston Atoll a "national treasure," though it would seem an odd sort of treasure that has areas marked off-limits because of plutonium and dioxin contamination. "I know there are areas marked 'Contaminated—Keep Out,'" Muller says, "but they're not in your daily routine. They're out of the way."

Whether or not Johnston Island is really a national treasure, it has been a financial treasure for Gloria Muller. She worked a 48-hour week there, with eight hours at time-and-a-half. Housing and food were free, and because of Johnston's unincorporated territorial status she paid no federal taxes. "I would never have been able to get anyplace near where I am now, financially, if I hadn't found Johnston Island," she says. "Nobody can realize the financial advantages of going down there until they've been there. It's difficult on the Army because there are so few women, and they're all young kids, so many of them hate it. But there are always a few of them who just love it because of the sports."

Johnston Island is a unique place, and one that Muller remembers fondly. She speaks warmly of the community spirit there, and of how well everyone got along despite living in close quarters, and she calls Johnston Island's small-contained society "pretty much as close to a utopia as you're going to get on this earth."

Still, after five years of near-utopia, Muller was ready to return to the real world. "Careerwise, personalwise, I had to get back," she says. "I figured if I stayed any longer, I would have had a more difficult time fitting back into life here."

On Johnston Island, if you can put out of your mind any uneasiness you might have over possible nerve gas disasters, life is uncomplicated. Your meals are prepared for you, much of your cleaning is done for you, and your whole world is within walking distance. All you have to worry about is doing your job each day. "The guys who have been there 15 or 20 years," says Muller, "I don't think will ever be able to adjust to coming back here. As it was, my first month back I felt like I was going five miles an hour and everybody else was doing 100." —V.L.

*More than half of Johnston Island's residents are in the military; the rest are civilians working for firms with government contracts.

found no evidence that the islands had ever been inhabited.

Far removed from centers of power and commerce, Johnston Island played little role in events of the 19th century. In March 1858 the captain of an American merchant schooner planted a U.S. flag there, and four months later King Kamehameha IV declared Johnston part of the kingdom of Hawaii. But no one really cared; there was no fresh water there and, apart from a little guano mining, no reason for anyone to visit. In 1898, when Hawaii was annexed by the United States, Johnston Atoll became an undisputed U.S. territory. In 1923 a scientific expedition visited Johnston to study seabirds, and three years later Johnston was named a federal bird refuge by President Calvin Coolidge.

Starting in the 1930s, the American military began to take a hard look at Johnston Island because of its strategic mid-Pacific location. In 1939 a lagoon seaplane landing area was constructed on Sand Island, a tiny island half a mile from Johnston. In December 1941 the atoll was shelled several times by Japanese vessels; there was damage but no injuries. Throughout World War II Johnston

was used as a major transport terminal for the Pacific, servicing aircraft going to and from battle fronts; it was used again as a transport center during the Korean War.

In 1958 Johnston's nuclear era began. Operational control of the atoll was given to Joint Task Force Seven, and the islands became a center for the atmospheric testing of nuclear weapons. Several of the tests could be seen from Hawaii, lighting up the night sky here. In 1962 three nuclear tests misfired, resulting in plutonium contamination of parts of the atoll. In 1963 when the Limited Test Ban Treaty was signed (banning nuclear weapons tests in the atmosphere, underwater and in outer space), part of the agreement was that the United States would maintain a facility to resume nuclear testing in case the treaty was violated by the Soviet Union. Johnston Island was named as that facility.

The men of the Army's 267th Chemical Company take care of the nerve gas on Johnston Island. Red Hat is the section of the island where the chemical weapons are stored.

And that—in theory if not practice—has been the military role of the island for the last 21 years: a site to be maintained in a state of preparedness for nuclear testing.

But there's not much chance of nuclear tests being conducted there in the foreseeable future. In 1971, as a condition of Okinawa's being returned to Japan, the Japanese government requested that American chemical weapons stockpiled on Okinawa be removed. So, in a project called Red Hat, the weapons were shipped to Johnston Island. And there they sit today, 13 years later, in bunkers and metal warehouses watched over by Army personnel authorized to use deadly force to protect them, a collection of unwanted rockets, bombs, mines and assorted projectiles filled with some of the most dangerous nerve gases ever concocted, their containers slowly corroding in the salt air.

As anyone familiar with the nuclear arms race knows, it can be relatively easy to build fearsome weapons, but much harder to get rid of them. So too with chemical
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Johnston Island

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weapons: They are easier to create than destroy.

The United States used to dispose of unwanted chemical munitions this way: The weapons would be loaded onto a decommissioned Liberty ship, towed out to sea and sunk beyond the continental shelf in a deep oceanic trench. Not surprisingly, the National Academy of Sciences did not look favorably on this out-of-sight, out-of-mind policy. "Dumping at sea should be avoided," it advised the Army more than a decade ago.

What kinds of chemical weapons are on Johnston Island today? Much of this information is still classified, but the Army has released some figures. There are two types of nerve gas there, and mustard gas. Among the weapons the Army is hoping to get rid of are "13,889 M55 rockets containing nerve agent VX and 58,419 M55 rockets containing nerve agent GB."

Put simply, these nerve gases are extremely bad for your health. Both GB and VX are "rapid-acting lethal nerve agents." GB (chemical name: Isopropylmethylphosphonofluoridate) was developed by the Germans, who had enormous stockpiles of it in World War II. But it wasn't used in that war, probably because each side was afraid of the other's retaliatory capability. VX (chemical name: O-ethyl[s-diisopropylaminoethyl]methylphosphonothioate) was reportedly born out of a British company's search for a "super insecticide." Both GB and VX are potent; a drop the size of a pinhead inhaled or absorbed through the skin can be fatal.

To give a more graphic example of the gases' lethality: The gases are now stored in bunkers and metal warehouses on Johnston Island, but let's assume just for the sake of argument that a warehouse full of M55 rockets containing GB and VX were located in the middle of Honolulu. And let's assume that a plane crashed into that warehouse and released all the nerve gas. Would it kill everybody in Honolulu? When asked that question, Capt. Barry Peterman of the U.S. Army Toxic and Hazardous Materials Agency said it would depend on dispersal factors such as wind, but "It'd do a pretty good job."

Nerve gas has recently been in the headlines, as Iraq has re-



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portedly used it, along with mustard gas, against advancing Iranian troops. This is a violation of the 1925 Geneva accords which ban the use of chemical weapons, an agreement which grew out of the indiscriminate gas attacks of World War I. Of course those World War I attacks mostly involved mustard gas, which causes blisters and burns but is not nearly as deadly as nerve gas.

An interesting question to ask is: Why does the Army want to get rid of Johnston Island's GB and VX at this time? Is it because the Army has disavowed the principle of ever waging chemical warfare? Hardly. From the military's point of view, the problem is not with the nerve gas itself, but with the M55 rockets. "GB, VX and mustard gas are not obsolete," says Capt. Peterman. "It all boils down to having a retaliatory capability. We know in fact the other guy has it. And if the other guy has it and you don't, that puts him one up on you.

"What is obsolete as far as Johnston Island is concerned is the delivery mechanism of the M55 rockets. The M55 rockets come as a unit with a shipping and firing tube made out of

fiber glass. There are two little wires sticking out of the back of that tube. We used to have a launcher, which was really nothing more than a series of hollow cylinders, and you'd insert that tube into it, put the wires into the launch mechanism and press the button. Well, the launchers are now out of the system, so it doesn't make a whole lot of sense to keep the rockets around."

An M55 rocket is 6½ feet long and weighs 57 pounds. In Johnston Island's corrosive sea-air environment the rockets are rusting and prone to leaks. They are dangerous and they serve no purpose; in a battle, they could not be launched. If a soldier wanted to use these M55 rockets against an enemy, he would have to *throw* them, or perhaps drop them off a cliff.

One aspect of nerve gas storage at Johnston Island that has concerned officials here is the possible hazards such storage poses to Hawaii. Is there any way that, in a "worst-case" scenario, Hawaii's residents could be endangered by the GB and VX stored 700 miles away?

In 1972 Hurricane Celeste moved

across the Pacific with winds of more than 100 miles per hour. Before the storm hit Johnston, the island's population was evacuated to Hickam Air Force Base. At that time, there was concern in the Honolulu press about what might happen if the nerve gas containers were somehow broken open by the storm, and the gas swept up into the eye of the hurricane and sent swirling in the direction of Hawaii. But in the end, nothing happened. No harm came to Hawaii, and the Johnston Island personnel returned home without problems.

But one local environmentally-conscious person (who prefers to remain anonymous) has another worry: chemicals getting into fish. "I'd expect there to be some leakage down there," he says. "If a hurricane hit that place, the whole place could be wiped out." He feels Johnston Island is close enough to Hawaii to be concerned about possible chemical contamination of the ocean food chain. Some species of food fish are migratory; it's also possible an occasional fisherman from Hawaii might venture into the Johnston area. "You don't know where the fish are going or where they've been," he says.

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Environmental accidents happen. Indeed, an August 1983 letter from Honolulu mayor Eileen Anderson to the U.S. Army Corps of Engineers addressed this. "We must express our concern," wrote the mayor (the letter was actually drafted by an environmental officer in the city's engineering department), "that accidents can happen... We are aware that there have been several admitted incidents on Johnston Island which have not been highly publicized. Three test missile malfunctions in 1962 resulted in contamination... by radioactive materials. A more recent incident occurred when there was an accidental spilling of the herbicide Agent Orange and dioxin during storage and handling activities in the area northwest of the Red Hat storage area.* In the latter incident it was shown that relatively innocent inattention to minute details (temporary storage of empty containers) can result in serious problems of contamination."

Officials deny that Johnston Island's chemical weapons pose any danger to Hawaii—either through a natural disaster such as a hurricane, or through entry into the ocean food chain.

■ "I can't see any conceivable way that an agent could get to Hawaii," says Capt. Peterman.

■ "Based upon information provided by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), I don't see any risk of that at all," says James Maragos, an environmental scientist with the U.S. Army Corps of Engineers. According to USATHAMA, the nerve gases are relatively rapidly "hydrolyzed," meaning that the compounds break apart and become less dangerous when they react with water.

■ "Frankly," says Rob Shallenberger, a refuge manager who has jurisdiction over Johnston for the U.S. Fish & Wildlife Service, "I don't have any information about the extent to which these chemicals can travel. My understanding is that they would dissipate rather rapidly."

No one denies, however, the dangers the chemicals pose to Johnston Island residents. Although the Army claims there has never been a gas-related fatality there, every Johnston resident has a gas mask and visitors are routinely issued gas masks on

arrival. And with the threat of Hurricane Celeste in 1972, authorities wasted little time getting everyone off the atoll. "That says it all," says Maragos.

Despite the official assurances, not everyone is totally convinced that Hawaii is outside of Johnston's danger zone. One Hawaii resident points out that traces of radioactivity have been showing up in fish in Tahiti—a consequence of French nuclear testing in the area. "I'm familiar enough with environmental claims by 'experts' to be skeptical when someone says there will be no impact," he says. "Anyone can say something won't happen, but it's going to take more than a study by the government or the military to convince me."

Johnston Island is currently one of a handful of sites where American chemical weapons are stored. Other states with storage facilities include Oregon, Alabama, Kentucky, Colorado and Utah. In Utah, at a place called Tooele, there is also a chemical "demilitarization" plant where unwanted munitions are destroyed. Since 1979, more than 26,000 chemical weapons have been destroyed there, reportedly without serious incident.

It's safe to say that, from the Army's point of view, Johnston Island is the least desirable of its nerve gas storage sites. Johnston is isolated and exposed to the elements; also, the storage facilities are primitive and the environment is corrosive. But it's highly unlikely the weapons will ever be moved to the Tooele plant for destruction. Why? First, as a practical matter, it would be hazardous to transport the munitions in their present deteriorating physical condition. Second, there's a legal problem; in 1970 a public law was passed prohibiting the return of chemical weapons to any of the 50 states from abroad.

So, realistically, the most practical alternative seems to be to get rid of the weapons on Johnston Island—and plans are now being made to do this. Last year an Environmental Impact Statement on a Johnston Atoll Chemical Agent Disposal System (JACADS) was prepared by the U.S. Army Corps of Engineers. Their conclusion was that a major chemical demilitarization plant on Johnston is feasible. It would be somewhat similar to the Army plant at Tooele. Total cost to make such a plant operational

*The Agent Orange came to Johnston Island from Vietnam in 1972. In 1977 it was incinerated at sea by the Dutch ship *Vulcanus*.

is estimated at around \$150 million. Whether or not funding will be made available by Congress will probably be determined by the end of this year. If all goes as planned, groundbreaking for the facility would take place in the summer of 1985 and the plant would start destroying M55 rockets in 1988.

How are chemical weapons destroyed? It's a complex operation, but this much you can say: They had better be destroyed *carefully*. Capt. Peterman gives a basic outline of the process: "The initial step is to disassemble to the extent possible the munition, draining the agent into a holding tank. In general, you separate the agent and the explosive component into different systems. Then the agent is incinerated in what we call a liquid incinerator, and the rocket body and the explosive component go into a deactivation furnace." In short, the process involves various levels of high-technology incineration. Most of the work is done by remotely controlled equipment.


There are still details to be ironed out—such as what will become of the contaminated residue (called scrubber waste) at the end of the incineration process. The Army, of course,

says JACADS will be safe and environmentally sound. Although the Army *has* received praise for the thoroughness of its JACADS report, the fact is the technology is so specialized that few civilian scientists understand the demilitarization process or the nerve gas well enough to have an informed opinion about it. The Army cites the safety record of its plant in Utah, where it has destroyed approximately 26,000 weapons in five years. Still, on Johnston it is planning to destroy at least 72,000 weapons and possibly a lot more, though just how much more remains classified information.

The whole issue of chemical weapons is full of ironies. President Reagan has recently put forth a new proposal for a comprehensive treaty banning chemical weapons. At the same time, he has asked Congress for funds to produce more chemical weapons. If funding is approved, these would be the first chemical weapons the United States has produced in 15 years. The theory is that by producing more chemical weapons as a deterrent, we would force the Soviet Union to the bargaining table

so that eventually we would all have fewer chemical weapons. Meanwhile, in Hawaii's own "backyard," we are trying to figure out how to get rid of the chemical weapons we already have.

Unanswered questions remain. If the multimillion-dollar JACADS plant is built, will it destroy all the chemical weapons on Johnston Island and not just the M55 rockets? And if the JACADS plant is *too* successful, might it become a center for destroying chemical weapons from all over the country?—a prospect that would not seem to be in Hawaii's best interests.

Still, it seems in everyone's interest to get rid of the chemical weapons that are now on Johnston Island. It would arguably be better for Hawaii and it would definitely be better for Johnston. The Army would lose little in the way of useful weaponry, and it would probably be a relief for the men of the U.S. Army Western Command's 267th Chemical Company (WESTCOM) who guard and take care of the deteriorating weapons on a daily basis. As one WESTCOM officer put it, "We don't want to sit there and watch that shit forever." 

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