Consumer Confidence Report
Drinking Water System 2011

Commander, Fleet Activities, Sasebo

This annual report summarizes the quality of water delivered by Commander, Fleet Activities, Sasebo (CFAS), including Sasebo main base, Maebata, Sakibe, Hario Housing, Akasaki, Iorizaki and Yokose.

Under the "Consumer Confidence Reporting Rule" of the Federal Safe Drinking Water Act (SDWA), public water systems are required to report water quality information to the consuming public. Presented in this report is information on the source of our water, its constituents and the health risks associated with any contaminants. This report is designed to further public understanding about public water systems, potential hazards and technical language that is required by the Safe Drinking Water Act, amended in 1996, and the Naval Facilities Engineering Command (NAVFAC) Policy Letter 5090, Ser EV/10011 issued on July 6, 2010.

Our goal is, and always has been, to provide you with a safe and dependable supply of drinking water.

Where does our water come from?

Our potable drinking water is purchased from two sources. The Sasebo City Waterworks Bureau provides water to the Main Base, Sakibe, Maebata, Hario Housing, Akasaki and Iorizaki areas. The Saikai City Waterworks Bureau provides potable drinking water to Yokose. These waterworks filter and chlorinate the drinking water provided to us. Both waterworks obtain their water from one or more of the following surface water sources: Ohno water treatment plant, Yamanota water treatment plant, Hirota water treatment plant and Saikai-shi Chubu water treatment plant.

This report does not include the water at Hario-shima because it has been classified by the CFAS Environmental Division as a non-potable water source. The non-potable determination is due to fact the water at Hario-shima comes from a different source (Hario-shima groundwater) and is not monitored daily for

turbidity. Turbidity is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air. The Hario-shima distribution system does not currently have the infrastructure to perform daily monitoring. However, the water at Hario-shima is monitored for all primary and secondary drinking water contaminants on a regular basis and test results show the water is safe for cooking, bathing, cleaning and irrigation. The U.S. Environmental Protection Agency (EPA) requirement for daily turbidity testing is only reason CFAS Environmental has classified this water source as non-potable.

How does the water get to my faucet?

The Naval Facilities Engineering Command (NAVFAC), Public Works Department (PWD) at CFAS operates the water distribution system servicing your area. The distribution system is a combination of pipes, valves and pumps which maintain a minimum positive water pressure of 20 pounds per square inch (psi) at all times. The water distributed at Hario Housing is maintained in above ground storage tanks and the system has a chlorine injection system which is used only if water pressure from the city falls below 20 psi. The Sasebo and Saikai City Waterworks Bureaus do not fluorinate their water supplies.

How pure is our water?

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

- ***Microbial contaminants***, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- ***Inorganic contaminants***, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

- ***Pesticides and herbicides***, which may come from agriculture, urban stormwater runoff, and residential uses.

- ***Organic chemical contaminants***, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and may come from gas stations, urban stormwater runoff, and septic systems.

- ***Radioactive Contaminants***, which can be naturally-occurring or the result of oil/gas production and mining activities.

The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA's website at http://www.epa.gov/safewater/index.html

Last year, as in years past, our drinking water met all criteria required by the Japan Environmental Governing Standards (JEGS). The JEGS are the Department of Defense (DoD) self governing standards that are intended to ensure DoD activities and installations in Japan protect human health and the natural environment through the promulgation of specific environmental compliance criteria. Drinking water monitoring standards in the JEGS are derived from the same monitoring requirements used in the U.S. It requires us to test our water for contaminants, on a regular basis, to ensure it is safe to drink.

Are their any other contaminants I should know about?

Lead

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to Lead in drinking water than the general population. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Last year, as in years past, our tap water did not exceed the Lead drinking water health standards requirements set forth in the JEGS. When your water has been sitting for several hours, you can further minimize the potential for Lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. Information on Lead in drinking water is available at:

http://www.epa.gov/safewater/lead

Nitrate/Nitrite

Nitrates are naturally present in soil, water, and food. They are used primarily to make fertilizer. Nitrates themselves are relatively nontoxic. However, when swallowed, they are converted to nitrites that can react with hemoglobin in the blood, creating methemoglobin. This methemoglobin cannot transport oxygen, causing shortness of breath and blue baby syndrome. Last year, as in years past, our tap water did not exceed the Nitrate/Nitrite drinking water health standards requirements set forth in the JEGS. Information on Nitrate in drinking water is available at:

http://water.epa.gov/drink/contaminants/basicinformation/nitrate.cfm

Arsenic

Arsenic is odorless and tasteless. It enters drinking water supplies from natural deposits in the earth or from agricultural and industrial practices. Some people who drink water containing arsenic in excess of the drinking water standards for many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Last year, as in years past, our tap water did not exceed the arsenic drinking water health standards requirements set forth in the JEGS. Information on Arsenic in drinking water is available at:

http://water.epa.gov/drink/contaminants/basicinformation/arsenic.cfm

How is our drinking water monitored?

Sasebo/Saikai City Waterworks Bureaus and CFAS routinely monitors for 92 contaminants using EPA-certified laboratories and approved methods in accordance with Japan Environmental Governing Standards (JEGS) and Environmental Protection Agency (EPA) regulations. The following constituents are monitored at these frequencies:

- **Continuously** – pH, Conductivity, Turbidity, Chlorine Residue, Water Temperature and Water Pressure
- **Daily** – Turbidity (Except Hario-shima)
- **Monthly** – Total Coliform, Water Temperature, General Bacteria, Nitrate & Nitrite Nitrogen, Iron, Copper, Manganese, Chloride Ion, Hardness, Total Dissolved Solids, Total Organic Compounds (TOC), pH, Odor & Taste, Color, Turbidity, Chlorine Residue.
- **Quarterly** – Disinfection byproducts [Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5)]
- **Annually** – Lead, Copper, Inorganic Chemicals, Organic Chemicals, and Disinfection Byproducts (TTHM and HAA5)
- **Once every 3 years** – PCBs, Herbicides, Pesticides
- **Once every 4 years** – Radionuclides
- **Once every 9 years** – Asbestos

The tables presented below, pages 7 through 13, list contaminants that were detected during the 2009 sampling evolutions. The samples were collected from water faucets at various locations throughout the base. Only constituents that were detected are listed in the tables.

None of the samples exceeded JEGS drinking water health standards. As such, CFAS drinking water is certified as safe and potable.

Frequently asked questions

Why does the water sometimes look rusty?

Rusty or reddish tinted water may occur when a sudden change in pressure in the water distribution system causes rust in the distribution pipes to become dislodged. Iron causes the discoloration: it is not a health risk. If water looks rusty, flush your tap for three minutes or until clear before using water. Running the water will clear the piping system. If hot tap water is rusty, the water heater may need to be flushed.

I don't like the taste/smell/appearance of my tap water. What's wrong with it?

Even when water meets standards, you may still object to its taste, smell, or appearance. Taste, smell and appearance are also known as aesthetic characteristics and do not pose health risks. Common complaints about water aesthetics include: temporary cloudiness (typically caused by air bubbles) or chlorine taste (which can be improved by letting the water stand exposed to the air). If you want to improve the taste, smell and appearance of your water, you can install a home water filter. Please keep in mind that filters require regular maintenance and replacement, and if ignored, water taste, smell, or appearance issues may reoccur.

Is it okay to drink from a garden hose?

The water coming out of the tap is safe but a garden hose may be treated with special chemicals to make it flexible. Those chemicals may not be good for you and neither are the bacteria that may be growing inside the hose.

For more information on this report or base drinking water quality, please contact Tsunemasa Fujisawa, CFAS PWD Environmental Division (NAVFAC PRS4) at 252-3249.
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TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the U.S. Environmental Protection Agency (USEPA).

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

N/A: Not applicable

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

pCi/L: picocuries per liter (a measure of radiation)

SASEBO MAIN BASE – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Barium	mg/L	0.011	0.011	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	0.81	0.80	10	No	Erosion of natural deposits.
Sodium	mg/L	8.1	8.0	200	No	Erosion of natural deposits.
Lead	mg/L	0.0066	<0.001	0.015	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	mg/L	0.35	0.0086	1.3	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.016	0.015	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.011	0.0099	0.06	No	By-product of drinking water chlorination.

MAEBATA NMC ORDNANCE – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Barium	mg/L	0.018	-	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	0.37	-	10	No	Erosion of natural deposits.
Sodium	mg/L	13	-	200	No	Erosion of natural deposits.
Lead	mg/L	0.0013	<0.001	0.015	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	mg/L	0.025	0.023	1.3	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.064	-	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.042	-	0.06	No	By-product of drinking water chlorination.

SAKIBE LCAC STATION – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Barium	mg/L	0.018	-	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	0.49	-	10	No	Erosion of natural deposits.
Sodium	mg/L	12	-	200	No	Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.069	-	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.029	-	0.06	No	By-product of drinking water chlorination.

HARIO HOUSING – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Barium	mg/L	0.018	-	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	0.48	-	10	No	Erosion of natural deposits.
Sodium	mg/L	12	-	200	No	Erosion of natural deposits.
Lead	mg/L	0.0014	<0.001	0.015	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	mg/L	0.035	0.014	1.3	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.050	-	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.029	-	0.06	No	By-product of drinking water chlorination.

AKASAKI FUEL TERMINAL – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Barium	mg/L	0.011	-	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	0.76	-	10	No	Erosion of natural deposits.
Sodium	mg/L	7.5	-	200	No	Erosion of natural deposits.
Lead	mg/L	0.0035	<0.001	0.015	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	mg/L	0.059	0.0079	1.3	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.029	-	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.0096	-	0.06	No	By-product of drinking water chlorination.

IORIZAKI FUEL TERMINAL – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Barium	mg/L	0.0094	-	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	0.78	-	10	No	Erosion of natural deposits.
Sodium	mg/L	7.4	-	200	No	Erosion of natural deposits.
Lead	mg/L	<0.001	<0.001	0.015	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	mg/L	0.014	0.010	1.3	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.027	-	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.013	-	0.06	No	By-product of drinking water chlorination.

YOKOSE FUEL TERMINAL – DRINKING WATER CONSTITUENTS DETECTED IN 2011

Substances	Unit of Measurement	Detected Level		MCL/AL	Violation?	Possible Sources of Contamination
		High	Low		Yes / No	
Inorganic Contaminants						
Arsenic	mg/L	0.0090	-	0.010	No	Erosion of natural deposits.
Barium	mg/L	0.0097	-	2.0	No	Erosion of natural deposits.
Nitrate (as Nitrogen)	mg/L	1.0	-	10	No	Erosion of natural deposits.
Sodium	mg/L	9.4	-	200	No	Erosion of natural deposits.
Lead	mg/L	<0.001	<0.001	0.015	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	mg/L	0.048	0.016	1.3	No	Corrosion of household plumbing systems. Erosion of natural deposits.
Disinfectants & Disinfection Byproducts						
Total Trihalomethenes	mg/L	0.020	-	0.08	No	By-product of drinking water chlorination.
Halo Acetic Acids (HAAS)	mg/L	0.0061	-	0.06	No	By-product of drinking water chlorination.

Please note that CFAS monitors for many constituents, in addition to the ones listed above, in accordance with JEGS. Only those constituents that were detected during laboratory sampling are listed in these tables