

U.S. NAVAL AIR STATION (NAS) SIGONELLA CONSUMER CONFIDENCE REPORT

NAS II 2010

About this report.

We are proud to present to you our annual drinking water quality report. This Consumer Confidence Report (CCR) provides valuable information on water quality and supports the Navy's commitment to provide high quality drinking water to our service members, their families, and DoD personnel. Presented in this report is information regarding the source of our water, its constituents, and the health risks associated with any contaminants detected in quantities exceeding a drinking water regulatory maximum contaminant level (MCL) or an action level (AL). The report covers the period of 1 January through 31 December 2010.

What standards apply to drinking water overseas?

DoD water systems in Europe must comply with country specific Environmental Final Governing Standards (FGS). The Environmental Final Governing Standards-Italy (IFGS) were developed after a comprehensive review and comparison of U.S. Environmental Protection Agency (USEPA) Safe Drinking Water Act (SDWA) and Italian drinking water standards. When Italy and USEPA standards are different, the most protective requirement was adopted into the IFGS. This assures U.S. personnel, family members, and Italian employees receive drinking water which meets requirements mutually agreed upon by the U.S. and Italy.

Is my water safe?

Tap water provided to NAS II in 2010 met health-based IFGS, USEPA Primary Drinking Water Standards, and Italian drinking water standards. The chemical and biological analyses were below allowed MCLs established by the above drinking water standards, with the exception of **iron and color**. As discussed below, the iron concentration was above the IFGS MCL but below USEPA health-based drinking water standards.

Annual Declaration of Potability

The Naval Air Station, Sigonella, Italy, (NAS II) drinking water is declared POTABLE. This declaration is based on the Annual Drinking Water Surveillance results conducted by US ARMY PUBLIC HEALTH COMMAND REGION – EUROPE for calendar year 2010, and current U.S. Naval Air Station, Sigonella, Italy, Public Works Department, Environmental Division water analysis and test results. Though undesirable to consume, Iron and Color exceedences are of aesthetic value. Potability of drinking water is determined based on chemical and biological analysis.

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Where does my water come from?

Ground water is extracted from three wells located off the NAS II installation property. The water entering the base is treated by filtration using sand filters and reverse osmosis membrane. The drinking water is chlorinated before it is distributed around the base.

Source water assessment and its availability.

A source water assessment was conducted by an environmental engineering company contracted by the Navy. The last survey was completed in January 2009. Possible sources of potential contamination of the wells include local agricultural activities. Additional information about the source water assessment is available from the Public Works Environmental Office at 624-2722.

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. 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 from the Safe Drinking Water website, www.epa.gov/safewater/sdwa. The source of your drinking water is

groundwater produced at three wells. As water travels through the ground, it dissolves naturally occurring minerals (including radioactive material), and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water can include the following:

- Microbial contaminants, such as viruses and bacteria, may come from septic systems, agricultural livestock operations, and wildlife.
- Inorganic compounds, such as salts and metals, can be naturally occurring or result from urban stormwater runoff, industrial, domestic wastewater discharges, or farming.
- Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemicals, including synthetic and volatile organic chemicals, are by-products of industrial processes and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive compounds can be naturally occurring.

How can I get involved?

Customers should always observe water conservation practices. Water is a scarce resource in Sicily and everyone's cooperation in conserving water is greatly appreciated. If you have any questions, concerns, or ideas, please contact the Public Works Environmental Office Drinking Water Program Manager at 624-2722.

For what compounds is NAS II drinking water tested?

Drinking water at NAS II is tested at least monthly and analyzed according to standards according to standards established by the IFGS. The water is analyzed for over 110 individual parameters including inorganic chemicals, volatile organic chemicals, pesticides, disinfection by-products, radionuclides, microbiological contaminants, and residual chlorine (residual disinfectant). Information on the specific compounds tested and the testing frequency is available from the Public Works Environmental Office at 624-2722.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk

from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking website, www.epa.gov/safewater/sdwa.

Additional information for Iron

Iron is regulated as a secondary standard by USEPA, because it causes water to appear cloudy or colored, or to smell or taste bad. Exceeding a secondary standard may cause people to stop using the water even though the water is actually safe to drink. Secondary standards are set to give public water systems some guidance on removing these chemicals to levels that are below what most people will find noticeable. Because there was an USEPA standard, it was incorporated into the IFGS. Elevated iron is often an indicator of corrosion in the system and may cause discolored water or aesthetic effects in drinking water. Activities taken to reduce the iron concentration in NAS II drinking water include flushing the distribution system to remove settled particulates.

Water quality data table.

The following tables list the level of the detected drinking water contaminants regulated by the IFGS which were monitored during 2010, and compounds detected in previous years that are on a greater than one-year monitoring cycle. The presence of contaminants in the drinking water does not necessarily indicate that the water poses a health risk.

Contaminants (units)	USEPA MCLG or MRDLG	IFGS MCL	Your Water	Range		Year	Violation	Typical Source
				Low	High			
Disinfectants and Disinfection By-products								
Chlorine (as Cl ₂) (ppm)	4	4	0.76	0.015	0.76	2010	No	Water additive used to control microbes.
TTHMs (total trihalomethanes) (ppb)	zero	30	5.8	NA	5.8	2010	No	By-product of drinking water disinfection.
Inorganic Contaminants								
Ammonium (ppb)	NA	500	270	<0.01	270	2010	No	Runoff from fertilizer use, leaching from septic tanks, sewage.
Boron (ppm)	NA	1	0.37	NA	0.37	2010	No	Erosion of natural deposits.
Chloride (ppm)	NA	250	26	NA	26	2010	No	Chlorides are leached from rocks into soil and water by weathering.
Color (color units)	NA	Acceptable to consumer	200	<5	200	2010	No	Natural or human-induced.
Copper (ppm)	NA	1	0.011	NA	0.011	2010	No	Erosion of natural deposits.
Iron (ppb)	NA	200	910	47	910	2010	Yes	Erosion of natural deposits, corrosion of piping and household plumbing systems.
Lead (ppb)	NA	25	0.4	NA	0.4	2010	No	Erosion of natural deposits.
Manganese (ppb)	NA	50	3	NA	3	2010	No	Erosion of natural deposits.
Nickel (ppb)	NA	20	2	NA	2	2010	No	Erosion of natural deposits.

Contaminants (units)	USEPA MCLG or MRDLG	IFGS MCL	Your Water	Range		Year	Violation	Typical Source
				Low	High			
Inorganic Contaminants (continued)								
Nitrate (as Nitrogen) (ppm)	10	10	1.3	NA	1.3	2010	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Odor (threshold odor number)	NA	Acceptable to consumer	1	No Detectable Odor	1	2010	No	Natural or human-induced.
Sodium (ppm)	NA	200	32	NA	32	2010	No	Erosion of natural deposits, leaching.
Sulfate (ppm)	NA	250	39	NA	39	2010	No	Erosion of natural deposits, leaching.
Total Dissolved Solids (ppm)	NA	NA	180	NA	180	2010	No	Natural or human-induced.
Total Hardness (ppm)	NA	150-500	67	NA	67	2010	No	Natural or human-induced.
Total Nitrate and Nitrite (as Nitrogen) (ppm)	10	10	1.3	NA	1.3	2010	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Turbidity (NTU)	NA	Acceptable to consumer	29	0.35	29	2010	No	Soil runoff.
Radioactive Contaminants								
Alpha Emitters (pCi/L)	zero	15	2.1	-0.58	2.1	2008-2009	No	Erosion of natural deposits.
Beta/photon emitters (pCi/L)	zero	50	1.7	1.2	1.7	2008-2009	No	Decay of natural and man-made deposits.

Contaminants (units)	IFGS AL	90 th percentile	Samples Exceeding AL	Violation	Typical Source
Copper – AL at consumer taps (ppm)	1.3	0.3	0	No	Corrosion of household plumbing systems.
Lead – AL at consumer taps (ppb)	15	4.2	0	No	Corrosion of household plumbing systems.

Unit Descriptions	
Term	Definitions
NTU	Nephelometric Turbidity Unit – A unit for measuring turbidity. Turbidity is a measure of the cloudiness of the water.
pCi/L	Picocuries per liter - A unit for measuring radioactivity.
ppb	Parts per billion, or micrograms per liter (µg/L).
ppm	Parts per million, or milligrams per liter (mg/L).

Important Drinking Water Definitions	
Term	Definitions
AL	Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL	Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water. USEPA sets MCLs as close to the MCLG as feasible using the best available treatment technology. MCLs are set by the USEPA or Italian water standards, and the most conservative (typically the lowest) value is adopted by the IFGS.
MCLG	Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by USEPA, and include a margin of safety.

For more information, please contact the Public Works Environmental Office at 624-2722.