CAMP LEMONNIER, DJIBOUTI (CLDJ) 2023 DRINKING WATER CONSUMER CONFIDENCE REPORT

01 July 2024

Is our water safe to drink?

Yes! The Camp Lemonnier, Djibouti (CLDJ) drinking water system continues to provide water that is safe and Fit for Human Consumption (FFHC), as stated in the Commanding Officer's Record of Decision dated 05 November 2013.

Our drinking water fully complies with the OEBGD (Overseas Environmental Baseline Guidance Document), Final Governing Standards (FGS) and the Navy CNICINST 5090.1B. This report includes a comprehensive list of sampled analytes with individual associated maximum contaminant levels (MCLs). A detailed list of parameters found in our drinking water is included in this report, along with a comparison to the maximum levels considered safe for the general public by these standards.

Why are there contaminants in drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels 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 from human activity.

Due to this, contaminants may be present in the source of drinking water, to include:

- **Microbial contaminants**, such as viruses and bacteria, that may come from wildlife, sewage treatment plants, septic systems, and livestock;
- **Disinfection by-products,** such as trihalomethanes (TTHM) disinfection by-products commonly produced during the chlorination of water;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- **Inorganic contaminants**, naturally occurring such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming;
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, Environmental Protection Agency (EPA) has regulations that limit the amount of certain contaminants in water provided by public water systems. Regular sampling is conducted to detect the level of contaminants in the water system. If the results are above regulatory levels, you will be notified by e-mail and Public Notification. You can learn more about contaminants and potential health effects by visiting the EPA Drinking Water Standards web site:

http://permanent.access.gpo.gov/lps21800/www.epa.gov/safewater/standards.html.

Where does our water come from and how is it treated?

The CLDJ water supply comes from groundwater pumped from aquifers under the camp through wells located on site. An aquifer is a body of permeable rock which can contain or transmit groundwater. Currently, drinking water is pumped from multiple groundwater wells at Camp Lemonnier and is piped to CLDJ's on-site treatment plant.

At CLDJ, pumped groundwater enters a treatment process consisting of several different technologies: filtration, ultraviolet (UV) disinfection, reverse osmosis (RO) and chemical disinfection. The on-site treatment plant, which is called a Reverse Osmosis Water Purification Unit (ROWPU), consists of eight multimedia filters, eight granular activated carbon filters, eight cartridge filters and four parallel RO treatment trains to ensure that CLDJ's tap water meets all regulatory requirements throughout the water distribution system. Following membrane treatment, sodium hydroxide is then added for pH adjustment and calcium hypochlorite is added for disinfection

Water Quality Data Tables

The following table provides the results of the above testing for calendar year 2023 (unless otherwise noted). CLDJ carries out testing for many more chemicals than are shown in this table, and only those contaminants detected in the water are presented in the table. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All contaminants detected in CLDJ drinking water are below the maximum Contaminant Level (MCL) allowed by OEBGD and EPA applicable requirements.

Term	Definition
mg/L	mg/L: number of milligrams of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
ND	ND: not detected
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water systems must follow.
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 allow for a margin of safety.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.

Table 1. CLDJ Drinking Water System Results

Organic Chemical						
Contaminant	(EPA's MCLG) ppm	Ideal Goal (EPA's MCLG) ppm	Highest Result ppm	Range of Test results ppm	Violation	Typical Source
Total Dissolved Solids	10	---	134	145	no	Runoff/leaching from natural deposits Runoff/leaching from natural deposits
Total Hardness as CaCO3	1.0	----	3.9	3.9	no	Runoff/leaching from natural deposits
Tetrachloroethylene	0.005	0.0005	0.0002	0.0002	no	Discharge from factories, dry cleaners, and auto shops (metal degreaser)Runoff/leaching from natural deposits
Nitrate (ppm)	10 ppm	10 as N	1.20	1.91	no	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Total Nitrate & Nitrite (ppm)	10 ppm	10 as N	1.20	1.91	no	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Sodium	0.20	---	0.00476	5.0-47.6	no	Discharge from industrial processes

Table 2a infection By-Products Parameters - Bldg. C200 (CLU ABC321)

TTHM & HALOACETIC ACIDS						
Contaminant	Highest Level allowed (EPA's MCLG) ppm	Ideal Goal (EPA's MCLG) ppm	Annual average (ppm)	Range of Test results ppm	Violation	Typical Source
TTHMs	0.080	NA	0.0204	0.012-0.030	no	Disinfection by-product
Haloacetic Acids (HAA5)	0.06	NA	0.0312	0.027-0.038	no	Disinfection by-product

Table 2b Disinfection By-Products Parameters - Bldg. 1020 (1030) CALA

TTHM & HALOACETIC ACIDS						
Contaminant	Highest Level allowed (EPA's MCLG) ppm	Ideal Goal (EPA's MCLG) ppm	Annual average (ppm)	Range of test result ppm	Violation	Typical Source
TTHMs	0.080	NA	0.0498	0.030-0.073	no	Disinfection by-product
Haloacetic Acids (HAA5)	0.06	NA	0.034	0.022-0.047	no	Disinfection by-product

Table 2c Disinfection By-Products Parameters - Bldg. 102(101 Combat Café)

TTHM & HALOACETIC ACIDS						
Contaminant	Highest Level allowed (EPA's MCLG) ppm	Ideal Goal (EPA's MCLG) ppm	Annual average (ppm)	Range of test result ppm	Violation	Typical Source
TTHMs	0.080	NA	0.0533	0.043-0.075	no	Disinfection by-product
Haloacetic Acids (HAA5)	0.06	NA	0.027	0.024-0.045	no	Disinfection by-product

Table 2d Disinfection By-Products Parameters - Bldg. 700/310 Galley

TTHM & HALOACETIC ACIDS						
Contaminant	Highest Level allowed (EPA's MCLG) ppm	Ideal Goal (EPA's MCLG) ppm	Annual average(ppm)	Range of test result ppm	Violation	Typical Source
TTHMs	0.080	NA	0.0127	0.008-0.020	no	Disinfection by-product
Haloacetic Acids (HAA5)	0.06	NA	0.0310	0.025-0.037	no	Disinfection by-product

Table 3: Lead and Copper results

LEAD AND COPPER- Tested at Customer's taps. Testing is done every 6 months						
Contaminant	EPA Action Level (ppm)	Ideal Goal (EPA's MCLG)	90% of the Test Levels were Less Than	#of Tests With Levels Above EPA's Action Level	Violation	Typical Source
Copper	1.3ppm	1.3ppm	0.0138	0 of 20	no	Corrosion of household plumbing system
Lead	10ppb	0	N/A	0 of 20	no	Corrosion of household plumbing system

There were no Lead detections.

VIOLATIONS, EXCEEDANCES, or MISSED SAMPLING EVENTS

CLDJ had **NO** exceedances of an action level (AL) or Maximum Contamination Level (MCL) in 2023. However, the Water Quality Oversight Council (WQOC) Sanitary Survey Report (Jan 2023) identified several monitoring deficiencies that occurred in 2023. Specifically:

1. The third-party drinking water quality compliance laboratory (Alhoty) report levels were greater than the CFR- and OEBGD mandated detection levels for some regulated in organic contaminants.
2-Source water Cryptosporidium sampling schedule was not in accordance with the applicable regulation.
3-Bacteriological sampling locations did not fully represent the entire distribution system (i.e., Combat Aircraft Loading Area (CALA] not represented). Chlorine was not measured at the same time and location as bacteriological

samples from approximately March to August 2023.
4-Quarterly disinfectant and disinfection byproduct (D/DBP) monitoring was not conducted at 90-day intervals.
4-Radionuclide samples were not collected at quarterly intervals in 2022/2023 in accordance with the applicable regulation.

CLDJ Water Conservation is Everyone's Responsibility

Lastly, the desert environment we live and work in requires that we practice water conservation. Saving water is simple and inexpensive. Practicing the following tips can make a big difference in conserving this precious resource:

- For repair of any water leaks anywhere and at any time; e.g., faucets and toilets, water line breaks. Call DSN: 824-2653 – the Base Operations Control Center (OCC) immediately!
- Take shorter showers - a 3-minute shower uses 7-8 gallons of water versus a 10-minute shower which uses 25 gallons.
- Shut off water while brushing your teeth, washing your hair and shaving can save up to 500 gallons a month.
- Run the clothes washer on a full load. No extra rinse is needed at CLDJ.
- Visit www.epa.gov/watersense for more information.

• What are per- and polyfluoroalkyl substances and where do they come from?

- Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) currently used for fighting petroleum fires at airfields and in industrial fire suppression processes. PFAS chemicals are persistent in the environment and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

• Is there a regulation for PFAS in drinking water?

- On April 10, 2024, the US EPA established MCLs for a subset of PFAS chemicals.

Compound	Final MCLG	Final MCL
PFOA	Zero	4.0 ppt
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

- ppt is parts per trillion
- EPA requires implementation of sampling in accordance with the new MCLs within three years of the publication date and implementation of any required treatment within five years.
- These limits did not apply for the 2023 calendar year because they had not been published. However, the DoD proactively promulgated policies to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every two years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA health advisory (HA) level of 70 ppt, water systems must take immediate action to reduce exposure to PFOS or PFAS. For levels less than 70 ppt but above the 4 ppt level (draft at the time of policy publication), DoD committed to planning for implementation of the levels once EPA's published MCLs take effect.

- **Has CLDJ tested its water for PFAS In 2023?**

- Yes. In AUG 2023, samples were collected.
- We are pleased to report that drinking water testing results were below the Method Reporting Limit (MRL) for all 29 PFAS compounds covered by the sampling method, including Perfluorooctanoic acid (PFOA) and Perfluorooctanoic sulfonic acid (PFOS). This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every two years for your continued protection.

Points of Contact

If you have any questions or concerns regarding this report or about the drinking water processes, please contact any of the following CLDJ Installation Water Quality Board (IWQB) members below:

Public Works Officer
DSN: 311-824-4064

Installation Environmental Program Director
311-824-5523

Environmental Health Officer
DSN: 311-824-4526