DEPARTMENT OF THE AIR FORCE
100TH AIR REFUELING WING (USAFE)
ROYAL AIR FORCE MILDENHALL, UNITED KINGDOM

4 December 2025

MEMORANDUM FOR RAF MILDENHALL

FROM: 100ARW/CC

SUBJECT: 2024 Consumer Confidence Report

1. The 2024 Consumer Confidence Report for RAF Mildenhall's drinking water is now available. This annual report provides the official results of last year's water quality testing across the installation.

2. Throughout 2024, our partners at the 48th Medical Group conducted regular monitoring in accordance with Air Force, U.S., and UK environmental standards. When testing identified areas that required follow-up, the appropriate corrective actions were taken at the time. This included targeted steps in child and youth facilities, where families were notified directly and interim precautions have remained in place. Work is also underway on longer-term system improvements to continue strengthening water quality across the base.

3. Based on ongoing monitoring and the actions already taken, our medical and engineering professionals assess that overall risk to the community remains low. Water quality sampling continues year-round, and we remain committed to addressing concerns promptly and keeping our community informed.

4. If you have questions about the CCR or water quality on-base, please contact the 48th Medical Group's Bioenvironmental Engineering Flight at 226-8047. Thank you for your attention and for being part of our community.

BYRUM.STEVE N.S. [redacted]
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Date: 2025.12.05 14:10:06 Z

STEVEN S. BYRUM, Colonel, USAF
Commander

2024 Consumer Confidence Report (CCR)

Annual Water Quality Report
RAF Mildenhall
United Kingdom

Introduction

This is an annual report detailing aspects of the water quality delivered to Royal Air Force Mildenhall (RAFM). The 48th Medical Group Bioenvironmental Engineering Flight tests the drinking water quality for many constituents as required by the U.S. Department of Defense Environmental Final Governing Standards for the United Kingdom. This report shows the results of our monitoring for the period of 1 January 2024 through 31 December 2024. Department of the Air Force Instruction 48-144, *Drinking Water Surveillance Program* requires all Department of the Air Force owned or operated systems to provide their consumers an annual water quality report. This following report is to help you understand where your drinking water comes from and what is in it. It will also help you to make informed choices that affect your family's health and help you understand the importance of protecting our drinking water sources.

Where does our water come from?

The RAFM drinking water system draws water from one source, an on-base groundwater borehole (well), that is filled with groundwater obtained from the Chalk aquifer. RAF Mildenhall's water supply is prepared for use using a Granular Activated Carbon system with natural salt and air strippers. Additionally, the water supply is treated with chlorination using a sodium hypochlorite solution for disinfection purposes and prevents bacteriological growth in the distribution system.

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Drinking Water Sources

Drinking water, including bottled water, may contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained through the U.S. EPA's National Primary Drinking Water Regulations page:

https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations

The sources of drinking water (both tap water 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 which may be present in source water include:

- ***Microbial contaminants***, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. **Turbidity and Total Organic Carbon are mentioned within this report. According to the EPA, neither have health effects but they can interfere with disinfection and provide mediums for microbial growth and the formation of disinfection by products such as trihalomethanes and haloacetic acids, respectively. Turbidity may indicate the presence of disease-causing organisms.**
- ***Inorganic contaminants***, such as salts and metals, which can be naturally-occurring or resulting from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- ***Pesticides and herbicides*** that may come from a variety of sources such as agriculture, urban storm water runoff, and septic systems.
- ***Organic chemical contaminants***, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- ***Radioactive contaminants***, which can be naturally occurring or resulting from oil and gas production and mining activities.

Water Monitoring Results Summary

In order to ensure that tap water is safe to drink, the Final Governing Standard for United Kingdom (FGS-UK), prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

Tables 1 – 5 list all of the primary drinking water standard contaminants that were detected during the most recent sampling events. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The FGS-UK requires us to monitor certain contaminants less than once per year due to the belief the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

NOTE: Terms and abbreviations used in this report are located on the final page of this report.

Table 1
Inorganic Contaminants

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Major Sources in Drinking Water
Aluminum (ppb)	17	8.6 - 17	200	0	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	0.56	0 - 0.56	10	0	Erosion of natural deposits in soil; runoff from orchards; glass and electronics production wastes
Barium (ppm)	0.028	0.015 - 0.028	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits in soil
Boron (ppm)	0.050	0.021 - 0.050	1	1	Discharge from coal burning factories; erosion of natural deposits in soil
Chromium (ppb)	1.3	0.86 - 1.3	50	50	Discharge from steel and pulp mills; erosion of natural deposits in soil
Nickel (ppb)	2.4	0.97 - 2.4	20	20	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits in soil
Nitrate (as N) (ppm)	6	5.6 - 6	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	1	0.69 - 1	10	10	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits in soil; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)

Table 2
Disinfection By-Product Compounds

Parameter and Units of Measure	Highest Level Detected and range of constituents	MCL	MCLG	Major Sources in Drinking Water
Haloacetic Acids (HAA5) (ppb)	9 (2 - 9)	60	N/A	By-product of drinking water disinfection
Total trihalomethanes (TTHMs) (ppb)	4.6 (1.1 - 4.6)	80	N/A	By-product of drinking water disinfection

Table 3
Lead and Copper—Housing

Parameter and Units of Measure	Samples Collected	90th%	Range	AL	MCLG	Typical Source of Contaminant
Lead (ppb)	44	1.8	0.35 - 6	10	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits in soil
Copper (ppm)	44	0.15	0.013 - 0.52	1.3	1.3	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits in soil

Table 4
Radioactive Contaminants

Parameter and Units of Measure	Highest Level Detected	MCL	MCLG	Major Sources in Drinking Water
Gross Beta (pCi/L)	1.92	27	0	Erosion of natural deposits in soil
Uranium (µg/L)	0.25	30	0	Erosion of natural deposits in soil

Table 5
Unregulated Contaminants: Per and Polyfluoroalkyl Substances (PFAS)

Parameter and Units of Measure	Highest Level Detected	MCL	Major Sources in Drinking Water
Perfluorooctanoic Acid (PFOA) (ppt)	2.4	4.0	Aqueous Film-Forming Foam (AFFF)
Perfluoroctane Sulfonate (PFOS) (ppt)	7.1	4.0	Aqueous Film-Forming Foam (AFFF)
Perfluorohexanesulfonic acid (PFHxS) (ppt)	17	10	Aqueous Film-Forming Foam (AFFF)
Hexafluoropropylene oxide dimer acid (HFPO DA) (ppt)	0	10	Aqueous Film-Forming Foam (AFFF)
Perfluorononanoic acid (PFNA) (ppt)	0	10	Aqueous Film-Forming Foam (AFFF)
Perfluorobutanesulfonic acid (PFBS) (ppt)	1.9	N/A	Aqueous Film-Forming Foam (AFFF)
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS (Hazard Index of 1)	1.7	1	This is a combination of multiple PFA substances that when combined together must maintain a ratio less than 1.

Additional Information

PFOS PFOA

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 industrial 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, food packaging, and cookware. They are also contained in some fire-fighting foams such as aqueous film-forming foam, or AFFF, used for fighting petroleum fires.

Is there a federal regulation for PFAS in drinking water?

Yes. On April 26, 2024, the Environmental Protection Agency (EPA) published a final National Primary Drinking Water Regulation for certain per- and polyfluoroalkyl substances (PFAS) under the Safe Drinking Water Act (SDWA). This rule went into effect on June 25, 2024 with a compliance deadline of April 26, 2029, five years from the date up publication. While the rule requires routine sampling for certain PFAS by no later than 2027, DoD has been sampling drinking water for PFAS compounds at all DoD-owned and operated water systems since 2017. Under the new rule, the following limits, called Maximum Contaminant Levels (MCL), were established, and DoD water systems will need to meet these levels by April 2029.

For systems where DoD provides drinking water, the Department is collecting the necessary sampling information and is taking actions to ensure compliance within the required 5-year timeframe. In May 2025, EPA announced the intent to rescind the regulations for some PFAS chemicals. Currently, DoD is finalizing a policy on how to apply the rule OCONUS.

Substance	MCL
PFOA	4.0 ppt
PFOS	4.0 ppt
PFHxS	10 ppt
HFPO-DA (GenX)	10 ppt
PFNA	10 ppt
PFBA	n/a
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	HI of 1 (Unitless)

Mixture of PFA Substances.

The sampling point is above the Hazard Index (HI) MCL if the HI exceeds the MCL and if two or more Hazard Index analytes had an observed sample result at or above the PQL in any of the samples.

Has RAF Mildenhall tested its water for PFAS?

Yes. In May and November of 2024 samples were collected from RAF Mildenhall.

We are informing you that the following PFAS compounds covered by the EPA PFAS drinking water rule were detected and the results are provided in Table 5. RAF Mildenhall has been studying treatment alternatives to remove PFAS, and we will take action as required by the DoD OCONUS drinking water policy. **Additional sampling and its frequency, if needed, will also be determined once the DoD PFAS Policy for OCONUS installations have been finalized**.

Additional Information

Is RAF Mildenhall Working to Reduce PFAS Levels in Their Drinking Water?

RAF Mildenhall is working on enhancing their drinking water treatment plant, to include more substantial PFAS reduction capabilities tailored to the installation. The project is in the design phase in and is scheduled to complete prior to April 2029, which is the timeframe designated by the DoD to reduce contamination at installations below the drinking water MCL.

Health Effects of PFA Substances

PFOS. Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood.

PFHxS. Some people who drink water containing PFHxS in excess of the MCL over many years may have increased health risks such as immune, thyroid, and liver effects. In addition, there may be increased risks of developmental effects for people who drink water containing PFHxS in excess of the MCL following repeated exposure during pregnancy and/or childhood.

Hazard Index. Per- and polyfluoroalkyl substances (PFAS) can persist in the human body and exposure may lead to increased risk of adverse health effects. Low levels of multiple PFAS that individually would not likely result in increased risk of adverse health effects may result in adverse health effects when combined in a mixture. Some people who consume drinking water containing mixtures of PFAS in excess of the Hazard Index (HI) MCL may have increased health risks such as liver, immune, and thyroid effects following exposure over many years and developmental and thyroid effects following repeated exposure during pregnancy and/or childhood.

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Lead and Copper sampling is conducted every 6 months by regulation. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at: 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

Terms Used in This Report

90th Percentile Level: The level of lead and copper at which 90% of drinking water samples taken in a system are below. This level is compared with the MCL for lead and copper to determine system compliance.

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

FGS-UK: Final Governing Standards for the United Kingdom - The governing environmental regulation for US military bases in the UK.

Level Detected: Laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

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.

Method Detection Limit (MDL): refers to the lowest concentration of a substance that can be reliably detected by a specific analytical method.

NTU: Nephelolometric Turbidity Units. A unit used to describe the clarity of water. Higher numbers relates to more cloudy water.

pCi/L: picocuries per liter

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

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

ppt: parts per trillion or nanogram per liter (ng/L)

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

Range: The range of the highest and lowest analytical values of a reported contaminant.

TT: Treatment Technique– required procedure or level of technological performance set when there is no reliable method to measure a contaminant at very low levels.

Customers with Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those 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. The EPA and Center for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available on the Safe Drinking Water Hotline or on the U.S. EPA's website, http://www.epa.gov.

This report is available online at: http://www.mildenhall.af.mil/. For more information or questions about this CCR please contact the 48th Operational Medical Readiness Squadron, Bioenvironmental Engineering Flight at 01638-545423.