

2025 Consumer Confidence Report (CCR)



Annual Water Quality Report RAF Fairford United Kingdom (UK)



Introduction

We are pleased to deliver our 2025 Consumer Confidence Report, which demonstrates that our drinking water meets or exceeds all applicable Final Governing Standards for the United Kingdom (FGS-UK, United States Environmental Protection Agency (US EPA) health standards, and Air Force Drinking water requirements. The Bioenvironmental Engineering team routinely monitors and evaluates drinking water quality for a variety of constituents in accordance with drinking water requirements. This report summarizes the results of water quality monitoring conducted between 1 January—31 December 2025.

In accordance with Department of the Air Force Instruction (DAFI) 48-144, Drinking Water Surveillance Program, and FGS-UK requirements, all community water systems must provide consumers with an annual water quality report. This report explains the source of your drinking water, identifies what is in it, and provides important information to help you make informed decisions while supporting the protection of our drinking water recourses.

Where does our water come from?

RAF Fairford draws water from two boreholes (wells) connected to a deep aquifer located within the installation. Raw water from the boreholes (wells) is pumped to the water treatment unit for filtration, reducing iron and turbidity levels. Sodium hypochlorite is added to the water supply by the 420th Air Base Squadron/CE Flight as a disinfectant, preventing bacteriological growth within the distribution system.. The treated water is then stored into a reservoir and high level storage tanks to maintain adequate pressure for the water distribution system.



Drinking Water Sources

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 by the US EPA's Safe Drinking Water Hotline (1-800-426-4791).

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 from human activity.

Contaminants that 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.
- **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. These 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 U.S. Environmental Protection Agency (US EPA) and the Final Governing Standard for United Kingdom (FGS-UK) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

Tables 1 – 6 list all of the primary drinking water standard contaminants that were detected during the most recent sampling for the constituent. 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 because the concentrations of these contaminants are not expected to vary significantly from year to year.

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

**Table 1:
Detection of Coliform Bacteria
1 January – 31 December 2025**

Parameters and Units of Measure	Highest No. of Detection	MCL	PHG (MCLG)	Typical source of Bacteria
Coliform, Total	0	No more than 1 positive monthly sample	0	Naturally present in the environment
Coliform, Fecal or <i>E. Coli</i>	0	A routine sample and repeat sample are total coliform positive and one of these is also fecal coliform or <i>E. Coli</i> positive	0	Human and animal fecal waste

**Table 2:
Inorganic Contaminants
1 January– 31 December 2025**

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	PHG MCLG	Major Sources in Drinking Water
Barium (ppm)	0.012	0 - 0.012	2	2	Released from rocks and soils through weathering
Boron (ppm)	0.15	0 - 0.15	1	N/A	Released from rocks and soils through weathering

Table 2 Continued:
Inorganic Contaminants
1 January– 31 December 2025

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	PHG MCLG	Major Sources in Drinking Water
Chromium (ppb)	2.9	1.3 - 2.9	50	50	Discharge from steel and pulp mills; erosion of natural deposits
Copper (mg/L)	0.012	0.0091 - 0.012	2	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Fluoride (ppm)	1.1	0 - 1.1	1.5	1.5	Erosion of natural deposits; water additive; discharge from fertilizer and aluminum plants
Nitrate (as N) (mg/L)	0.19	0.19	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (as N) (mg/L)	0.34	0.5	0.5	0.5	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Uranium (ppb)	0.18	0.052 - 0.18	30	30	Naturally occurring in some geological formations; may enter through erosion of rocks and soils.

Table 3:
Disinfection By-Product Compounds
1 January – 31 December 2025

Parameters and Units of Measure	Highest No. of Detection	Range of Levels Detected	MCL	PHG (MCLG)	Major Sources in Drinking Water
TTHMs [Total trihalomethanes] (ppb)	14	0 - 14	80	N/A	By-product of drinking water disinfection (2018)
HAA5 [Haloacetic acids] (ppb)	5	0 - 5	60	60	By-product of drinking water disinfection (2018)

Table 4:
Radioactive Contaminants
1 January – 31 December 2025

Parameters and Units of Measure	Highest No. of Detection	Range of Levels Detected	MCL	PHG (MCLG)	Major Sources in Drinking Water
Gross Beta (Bq/L)	0.07	0 - 0.07	1	0	Erosion of natural deposits
Combined Radium (226 & 228) pCi/L	0.65	0 - 0.65	5	0	Erosion of natural deposits

Table 5:
Synthetic Organic Compounds
1 January – 31 December 2025

Parameters and Units of Measure	Highest No. of Detection	Range of Levels Detected	MCL	PHG (MCLG)	Major Sources in Drinking Water
Dalapon (ppb)	0.16	0.16 - 0.62	200	0	Runoff from herbicides; leaching from agricultural application.

Table 6:
Secondary Drinking Water Standards
1 January – 31 December 2025

Parameters and Units of Measure	Highest No. of Detection	Range of Levels Detected	MCL	PHG (MCLG)	Major Sources in Drinking Water
Ammonium (ppb)	51	0 - 51	500	N/A	Naturally occurring from decomposition of organic matter; runoff from fertilizer use; leaching from sewage.
Chloride (ppm)	25	25	250	N/A	Runoff/leaching from natural deposits; seawater influence
Conductivity	640	0 - 640	2500	N/A	Dissolved minerals from natural deposits; influenced by salts and other inorganic substances.
Odor	Acceptable to Consumers and no Abnormal Change				Naturally-occurring organic materials
Sulfate (ppm)	60	0 - 60	250	N/A	Runoff/leaching from natural deposits; industrial wastes
Taste	Acceptable to Consumers and no Abnormal Change				Naturally-occurring organic materials

Additional Information

Nitrate

Although the level of nitrate (refer to table 2 on water quality data, p. 4) is consistently below the health effect level, the EPA requires the following information be included in this report: "Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue-baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider."

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 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 Drinking Water Hotline or on the US EPA's website, <http://www.epa.gov>.

Copies of this report can be requested via mail by sending a self-addressed stamped envelope to:

ATTN: 2024 RAF Fairford Water Quality Report
422 MDS/SGOJ, Unit 4628
APO, AE 09494

For more information please contact the 422d Medical Squadron, Bioenvironmental Engineering at DSN: 314-236-8838/8083.



TERMS USED IN THIS REPORT

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 United States Environmental Protection Agency.

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).

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)

Bq/L: Becquerel per liter

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.

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.

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

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

mg/L: milligrams per liters