INCIRLIK AIR BASE 2024 ANNUAL DRINKING WATER QUALITY REPORT (CONSUMER CONFIDENCE REPORT)

REPORT SUMMARY: Incirlik Air Base is pleased to provide you the 2024 Consumer Confidence/Annual Water Quality Report. This report complies with the notification requirements found in 40 CFR 141, *National Primary Drinking Water Regulations* and Department of the Air Force Instruction 48-144, *Drinking Water Surveillance Program.*

This report is designed to provide details about where your water comes from, what it contains, information about specific contaminants of interest, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information, because informed customers are our best allies. Drinking water quality is monitored in accordance with the U.S. Department of Defense Final Governing Standards for Turkey (FGS-T).

Sources of Drinking Water and Contaminants that May Be Present in Source Water

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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.**
- **Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result 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 residential uses.**
- **Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff, agricultural application, and septic systems.**
- **Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.**

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the Final Governing Standards - Turkiye (FGS-T), prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. US Army Public Health Command (USAPHC) regulations and FGS-T also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking Water Contaminants Detected

The following tables list all of the drinking water 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. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Table 1. Routinely Monitored Constituents (Monthly)

Contaminants	MCLG	MCL	Range (Low – High)	Sample Date	Violation	Typical Source
Chlorine (as Cl_2) (mg/L)	4	4	0.09 - 1.55	2024	No	Disinfectant to control microbiological contaminants
Fluoride (mg/L)	1.5	4.0	0.2 - 1.6	2024	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories

Table 2. Monitoring for Trihalomethanes/Haloacetic Acids (TTHM/HAA5)

Contaminants	MCLG	MCL	Range (Low – High)	Sample Date	Violation	Typical Source
Disinfectants & Disinfection By-Products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)						
Haloacetic Acids (HAA5) (mg/L)	NA	0.060	<.00035 - .0056	2024	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (mg/L)	NA	0.080	<.00050 - .0474	2024	No	By-product of drinking water disinfection
Inorganic Contaminants						
Nitrate [measured as Nitrogen] (mg/L)	10	10	4.13 - 18.3	2024	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen] (mg/L)	0.5	0.5	<.010 - .058	2024	No	

Note: Compliance is determined by the sample location with the highest annual average at the Water Treatment Plant

Table 3. Per and Polyfluoroalkyl Substances (PFAS)

Contaminants	MCLG	MCL	Range (Low – High)	Sample Date	Violation
Perfluorooctanoic Acid (PFOA) (ng/L)	70	-	9.76 - 10.3	2024	No
Perfluorooctanesulfonic Acid (PFOS) (ng/L)	70	-	34.3 - 42.0	2024	No

(a) PFAS at Incirlik AB is monitored based on guidance provided by the Assistant Secretary of Defense. Finished drinking water was sampled/analyzed using EPA Methods 537.1 and 533. Continuous efforts and actions will be made to ensure measured PFAS within finished drinking water system remain below 70 ng/L. All on-base fire fighting vehicles were converted to foam that does not contain PFAS/PFOA in 2024.

Table 4. Sampling Results Showing the Detection of Lead and Copper

Contaminants	MCLG	MCL	Range (Low – High)	Sample Date	Violation	Typical Source
Lead & Copper						
Lead (mg/L)	.010	-	<0.005 - 0.319	2024	Yes	Corrosion of household plumbing systems, erosion of natural deposits.
Copper (mg/L)	1.3	-	0.0156 - 0.319	2024	No	

Note

In 2024, Bioenvironmental Engineering evaluated the drinking water system for Lead and Copper content and found that 4 out of the 20 points evaluated contained quantities of lead exceeding the maximum contaminant level goal (MCLG) of 0.010 mg/L.

BE reconducted sampling in 2025 reevaluating the sampling points and results show that lead content does not exceed the MCLG.

WATER SOURCE AND QUALITY

Where does our water come from?

There is one distinct Public Water System at Incirlik AB serving a population of approximately 4,000 people. Incirlik AB's water source is derived from five wells that are located on the installation. These wells each pull from the Karanse Formation Aquifer. Before the groundwater is used for human consumption, it is treated and purified at the Water Treatment Plant (WTP) by mechanical filtration, reverse osmosis water purification, with chlorine for disinfection, and hydrofluorosilicic acid for dental health. Water is then pumped to several storage tanks that feed and maintain pressure in the water distribution system. In order to ensure that Incirlik AB's water is safe to drink, the FGS-T requires monitoring of the water system and places limits on the concentration of contaminants in the water.

Why do water sources taste different?

The Safe Drinking Water Act and EPA deal primarily with the health effects of water. There are several additional constituents common in ground water that may impact the taste of our water. Most of these constituents are minerals, including calcium and sodium. Other factors that may impact taste include pH and water hardness. However, if your water has a strong chemical odor and taste that lingers after flushing your tap, call BE for further guidance.

If you suspect an illness is tied to the water you had on any US government facility on base, it is imperative that you seek treatment with your Primary Healthcare Provider and mention any potential sources of the illness. This course of action not only allows you to get the medical care you need but empowers medics to investigate the food and water quality to prevent the illness of others.

A few words about water quality...

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 sometimes radioactive materials. It may also pick up substances resulting from the presence of animals or from human activity.

Drinking water may reasonably be expected to contain at least small amounts of some contaminants. These contaminants are monitored on a quarterly basis by BE, and daily by Civil Engineering (CE) to make sure they are compliant with FGS-T standards. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline.

In the event of any major discrepancies within the water system occur, the Wing Commander will initiate a Town Hall.

Additional water conservation tips.

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference!

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.

CONTAMINANTS AND REGULATIONS

Information on Nitrates

Incirlik AB is surrounded in large part by agricultural land, therefore the nitrate levels in the drinking water are closely monitored. Nitrate levels may be affected by rainfall or agricultural activity. Nitrate concentrations in drinking water above 10 mg/L is a health risk for infants and small children.

Information on 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. Incirlik Air Base is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Information on Per- and Polyfluoroalkyl Substances (PFAS)

PFAS are a group of thousands of man-made chemicals. They 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 such as aqueous film-forming foam, used for fighting petroleum fires at airfields and in industrial fire suppression processes. PFAS compounds are persistent in the environment and some are persistent in humans–meaning they do not break down and can accumulate over time.

In 2016, the Environmental Protection Agency (EPA) established a lifetime health advisory (LHA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both compounds are types of PFAS. On 10 April 2024, the EPA published new drinking water standards for certain PFAS under the Safe Drinking Water Act (SDWA). AF is reviewing the EPA's new rule now, and will incorporate these standards into future sampling and analysis efforts.

Out of an abundance of caution, the DoD pursued PFAS testing and response actions beyond EPA requirements. In 2020, the DoD established a policy to monitor drinking water for 17 PFAS compounds at all service owned and operated water systems. While not a EPA requirement, in 2023, DoD improved upon its PFAS water monitoring policy by expanding the list of PFAS compounds monitored to 29, implementing continued monitoring of systems with detectable PFAS, and requiring initial mitigation planning. Current sampling in support of this effort is ongoing at Incirlik AB.

INSTALLATION WATER INITIATIVES

Base Backflow Prevention Initiative

The 39th Civil Engineering Squadron currently has a project in the works to repair and install water backflow preventers base wide. Backflow Preventers are used to protect the base water supply from potential contamination. The water flows one-way from the water treatment plant and stops the water from flowing backwards into the main water supply. The project is currently in process, and is projected to be completed by June 2025.

PFAS/PFOA Removal Initiative

All base fire fighting vehicles were converted to foam that does not contain PFAS/PFOA in 2024.

REPORT DEFINITONS	
Term	**Definition**
AL	**Action Level**
ppm	**parts per million, or milligrams per liter (mg/L)**
ppb	**parts per billion, or micrograms per liter (µg/L)**
% Positive samples/ month	**Percent of samples taken monthly that were positive**
NR	**Monitoring not required but recommended.**
RTCR	**Revised Total Coliform Rule: revision to the 1989 Total Coliform Rule (TCR) and is intended to improve public health protection.**
MCL	**Maximum Contaminant Level: the level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.**
MCLG	**Maximum Contaminant Level Goal: Level of contaminant in drinking water below which there are no known or expected risk to health. MCLGs allow for a margin of safety.**
TT	**Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.**
NA	**Not Applicable**
ND	**Not Detected**

For more information please contact:

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