

# Consumer Confidence Report

January 1, 2020 - December 31, 2020

Incirlik AB, Turkey

This Consumer Confidence Report provides information regarding the quality of drinking water produced and delivered by Incirlik Air Base. All of the drinking water originates from groundwater wells that are located on base. Drinking water quality is monitored in accordance with the US Department of Defense Final Governing Standards for Turkey (FGS-T). Bioenvironmental Engineering (BE) performed water surveillance for 91 constituents in the water in 2020 and a table of detected constituents is included in this report. The drinking water at Incirlik Air Base (AB) was in compliance with FGS-T requirements during calendar year (CY)2020. The contact person for questions regarding this report is SSgt Brandon Kessler, from the Bioenvironmental Engineering Flight, and he may be reached at DSN 676-6305 or commercial 0322-316-6305.

## **Definitions of Key Terms**

Maximum Contaminant Level (MCL): The maximum permissible level of a contaminant in water.

mg/L: Milligrams per liter; a unit of measure equal to one part per million (ppm) in water.

ppt: Parts per trillion.

## **Where does my water come from?**

There is one distinct Public Water System at Incirlik AB serving a population of approximately 5,000 people. Incirlik AB's water source is derived from four wells that are located on the installation. 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 hydrofluorocilic 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.

## **Were can I find these contaminants?**

Drinking water, to include bottled water, may contain at least trace amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water exceeds the maximum contaminant levels. Information about specific contaminants and their potential health effects can be obtained by calling the US

Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 001-800-426-4791 or BE at DSN 676-6305 or commercial 0322-316-6305.

**Contaminants that may be present in source water include:**

The source of drinking water here at Incirlik AB is an aquifer that feeds into four different wells. They are all individual wells, but feed into the WTP where it is filtered. 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, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 (001-800-426-4791).

**Who needs to take special precautions?**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer 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. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (001-800-426-4791).

### **Information on Nitrates**

Because Incirlik AB is surrounded in large part by agricultural land, 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. The nitrate concentrations during the CY2020 were below 10 mg/L.

### **Information on Fluoride**

In Turkey, the FGS-T standards set the fluoride MCL at 1.5 mg/L and a secondary/recommended standard of 4.0 mg/L. The FGS-T standards are more stringent for fluoride than US standards. No samples exceeded the FGS-T MCL of 1.5 mg/L in CY2020.

### **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. 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. 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead). No samples were above the regulatory limit for lead in CY2020.

### **Information on PFOS/PFOA**

Perfluorooctane Sulfonate (PFOS)/Perfluorooctanoic Acid (PFOA) were very popular compounds used by manufacturers and industrial facilities. Since the phased out use in the United States in the early 2000s, these chemicals are being continually studied for their adverse health effects. In recent years, more environmental agencies and military bases have started monitoring the contaminate levels in drinking water. In the third quarter of CY2020, BE sampled the clear water tank (treated water) for PFOS/PFOA. All sampling results were below the EPA's Health Advisory Limit of 70 ppt. BE will continue to monitor this contaminant on a quarterly basis. Some health risks associated with

PFOS/PFOA are thyroid dysfunctions, immune disorders, cholesterol changes, and liver problems. If you experience any of these symptoms, please contact your provider. If you would like more information about PFOS/PFOA please see this link [Drinking Water Health Advisories for PFOA and PFOS](#).

#### **Information on PCE/TCE**

Since 1999, Trichloroethylene/Tetrachloroethene (TCE/PCE) are the main contaminants of concern (CoC) in groundwater for Incirlik AB. 39 CES/CECV are continuously monitoring these parameters and levels. All drinking water samples taken in CY2020 for PCE/TCE were below the regulatory limit. Some health risks associated with PCE/TCE are kidney cancer, cardiac defects, and bladder cancer.

### Water Quality Data Table for Detected Constituents

Contaminants	FGS-T MCL	Maximum Reached	Violation	Typical Source
Chlorine	2 mg/L	1.6 mg/L	No	Disinfectant to control microbiological contaminants
Fluoride	1.5 mg/L	1.3 mg/L	No	Water additive that promotes strong teeth
Total Coliform Bacteria	0	0	No	Naturally present in the environment
Nitrate	10 mg/L	7.6 mg/L	No	Fertilizer use; Leaching from septic tanks and sewage; and Erosion
Nitrite	0.05 mg/L	<0.03 mg/L	No	Fertilizer use; Leaching from septic tanks and sewage; and Erosion
Total Nitrate/Nitrite	10 mg/L	7.6 mg/L	No	Fertilizer use; Leaching from septic tanks and sewage; and Erosion
Haloacetic Acids (HAA5)	0.060 mg/L	0.006 mg/L	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	0.080 mg/L	0.0017 mg/L	No	Byproduct of drinking water disinfection
Synthetic Organic Compounds (SOCs)	0.0001 mg/L	0.00005 mg/L	No	Pesticides/Polychlorinated Bisphenols (PCBs)
PCE (Tetrachloroethene)	0.005 mg/L	<0.0005 mg/L	No	Solvents, adhesives, metallic degreasing
TCE (Trichloroethylene)	0.005 mg/L	0.0006 mg/L	No	Dry cleaning solvent, metallic degreasing
Perfluorooctane Sulfonate (PFOS)/Perfluorooctanoic Acid (PFOA)	70 ppt	PFOS:42 ppt PFOA:15 ppt	No	Consumer products such as carpets, clothing, was also previously used for firefighting before it was phased out for less hazardous material

1 - Note: Several samples did not meet hold time requirements due to travel restrictions delaying their arrival at the certified laboratory.

2 - Note: EPA has released a health advisory for PFOS/PFOA of 70 ppt, however, it should be noted that advisories are non-enforceable and non-regulatory.

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