Water Quality Report

Boeing Palmdale - AFP42/Site 1
2019 Reporting Year

Important Information about your Drinking Water

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Introduction:

This Water Quality Report (also known as a Consumer Confidence Report) is a snapshot of last year's water quality analysis results for you, the User (and 'customer') at Boeing operations located in Palmdale, CA at AFP42/Site 1. This Report includes details about where your water comes from, what it contains, how we monitor water quality, and how our drinking water compares to Federal and California State standards for the 2019 reporting period.

Boeing is committed to providing you with information because informed customers are our best allies. Though the tap water at AFP42/Site 1 continues to maintain compliance with all water quality requirements, it is still recommended that personnel use bottled water provided on-site for consumption.

For addition information about water quality at AFP42/Site 1, please contact Vincent McKay at 661-265-2181 (or e-mail vincent.p.mckay@boeing.com.)

> Este informe conteiene informacion muy importante sobre su agua para beber. Favor de comunicarse 'AFP42/Site 1' a 661-265-2181 para asistirlo en espanol.

Drinking Water System Information and Sources of Water:

Your drinking water at AFP42/Site 1 originates from three wells that withdraw groundwater from the Lancaster Subunit at varying depths. These wells are referred to as Well 01, Well 03 and Well 04. (However, due to ongoing investigation, Well 4 is not in use and has been disconnected from the rest of the AFP42/Site 1 distribution system.) Your water undergoes disinfection via chlorination to protect you against microbial contaminants. AFP42/Site 1 does not have a connection with any publically-owned water district. Note- water supplied to the Site 1 Fire Suppression systems (i.e., fire hydrants, building sprinklers, standpipes, etc.) is provided by a separate water distribution system maintained by AFP42.

The Site 1 drinking water sources are considered most vulnerable to the following activities associated with contaminants that may be detected in the water supply:

airports – maintenance/ fueling areas, historic gas stations, known contaminant plumes, and military installations.

The California State Water Resources Control Board, Division of Drinking Water/ Hollywood District has conducted assessments of Well 01, Well 03 and Well 04. These assessments are used to determine the vulnerability of water sources to possible contaminating activities. Assessments of the drinking water source for Well 01 was completed in December 2001, Well 03 in November 2002, and Well 04 in March 2013.

You may request a copy of the assessments by contacting:

Mr. David McElheny, North Hollywood District Engineer, at (818) 551-2050, (email: David.McElheny@Waterboards.ca.gov.) or by visiting State Water Resources Control Board, Division of Drinking Water, 500 North Central Avenue, Suite 500, Glendale, CA 91203.

Drinking Water Safety:

The sources of drinking water (both tap water and bottled water) can include rivers, lakes, streams, ponds, reservoirs, springs, and (at AFP42/Site 1) from groundwater 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, which 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 by-products of industrial processes and petroleum production, and can also 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.

Drinking Water Health Considerations:

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by

public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791) or online at https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline. Information about bottled water is available at https://www.sparkletts.com/bottled-water-quality

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those 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. USEPA/ Centers for Disease Control (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 (1-800-426-4791) or online at https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-hotline.

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. Boeing/Palmdale 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. 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/lead.

California's comprehensive drinking water standards require a multi-step treatment process that includes filtration and disinfection. These processes remove and kills viruses, including coronaviruses such as COVID-19, as well as bacteria and other pathogens.

COVID-19 is transmitted person to person, not through water, according to the Centers for Disease Control and Prevention. Drinking water systems that utilize groundwater sources (such as AFP42/Site 1) maintain protective physical measures, including soil barriers, to ensure that water sources are protected from pathogens, including viruses.

In addition, AFP42/Site 1 uses chlorine disinfection to inactivate viruses or bacteria that might find their way into the water.

AFP42/Site 1 Drinking Water Sampling Program:

Boeing maintains a comprehensive water quality sampling program at AFP42/Site 1 that is in compliance with our Domestic Water Supply Permit issued by the State of California. Consistent with all public water systems in California, Boeing routinely monitors for bacteria to ensure that water delivered to customers is free of disease-causing agents. Other parameters, including temperature, pH, turbidity, chlorine residual, electrical conductivity, lead and copper, corrosion indices and disinfection byproducts, are monitored to alert operators about changing water quality conditions and avert potential problems.

Tables 1, 2, 3, and 4 will provide you with data on the levels of contaminants found during testing conducted on the tap water on site. Only those substances measured above the detection level of reporting (DLR) are listed. Because the DLR has been reached and the substance is listed, does not mean that a contaminant has been found at a harmful concentration.

Two contaminants came back with results higher than the MCL in 2019:

- The turbidty threshold was repeatedly exceeded in summertime and was attributed to excess water flow during the onset of summer and additional use of Well 01. This condition also resulted in water discoloration (brown water). Additional pumping/flow of Well 01 returned turbidity (and color) to normal.
- The continued issue of trichloroethylene (TCE) contamination in Well 04 is related to a historical underground TCE plume and is currently being investigated and remediated by the USAF (IRP Site 29.) Table 2 provides details related to monthly TCE monitoring performed by Boeing. TCE concentrations peaked in January at 11.7 ppb, and then gradually declined during the rest of the year. Note- Well 04 is disconnected from the AFP42/Site potable water system. The USAF expects to perform additional investigation and/or installation of remediation processes capable of removing TCE and Boeing expects to turn oversight of Well 04 over to the USAF in 4Q-2020. Monitoring of this issue will continue with the support of USAF and the California State Water Quality Control Board.

Definitions & Abbreviations:

DLR: Detection Limit for Purposes of Reporting (DLR) —The DLR is a parameter that is set by regulation for each reportable analyte.

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.
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.
ND: Not Detectable
NTU: Nephelometric Turbidity Units. The instrument used for measuring it is called nephelometer which measures the intensity of light scattered at 90 degrees as a beam of light passes through a water sample.
pCi/L: Picocuries per liter; A measure of radioactivity
ppb: Parts per billion; Equivalent to micrograms per liter
ppm: Parts per million; Equivalent to milligrams per liter
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 California Environmental Protection Agency.
Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
µS/cm: MicroSiemens per centimeter. Conductivity is measured in micromhos per centimeter (µmhos/cm) or microsiemens per centimeter (µs/cm). Distilled water has a conductivity in the range of 0.5 to 3 µmhos/cm.

Table 1 – Selected Drinking Water Quality Testing Results:

Classification	Contaminant	CCR Unit	MCL	PHG (MCLG)	Well 01 (Date of Sampling)	Well 03 (Date of Sampling)	Well 04 (Date of Sampling)	Typical Source
Inorganic	Chromium, hexavalent	ppb	-	0.02	3.72 (8/30/19)	8.40 (8/30/19)	5.48 (8/30/19)	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.
Inorganic	Lead	ppb	-	0.2	ND (8/30/19)	ND (8/30/19)	ND (8/30/19)	Discharges from industrial manufacturers; erosion of natural deposits
Inorganic	Nitrate (as N)	ppm	10	10	0.201 (8/30/19)	0.252 (8/30/19)	0.211 (8/30/19)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Secondary MCL	Chloride	ppm	500	N/A	2.77 (8/30/19)	2.70 (8/30/19)	2.89 (8/30/19)	Runoff/leaching from natural deposits; seawater influence
Secondary MCL	Color	Units	15	N/A	21 (8/30/19)	ND (8/30/19)	6 (8/30/19)	Naturally-occurring organic materials
Secondary MCL	Iron	ppb	300	N/A	0.682 (8/30/19)	0.014 (8/30/19)	0.076 (8/30/19)	Leaching from natural deposits; industrial wastes

Secondary MCL	Manganese	ppb	50	N/A	4.95 (8/30/19)	ND (8/30/19)	ND (8/30/19)	Leaching from natural deposits
Secondary MCL	Silver	ppb	100	N/A	ND (8/30/19)	ND (8/30/19)	ND (8/30/19)	Industrial discharges
Secondary MCL	Specific Conductance	uS/cm	1600	N/A	209 (8/30/19)	205 (8/30/19)	198 (8/30/19)	Substances that form ions when in water; seawater influence
Secondary MCL	Sulfate	ppm	500	N/A	15.4 (8/30/19)	15.2 (8/30/19)	14.4 (8/30/19)	Runoff/leaching from natural deposits; industrial wastes
Secondary MCL	Total Dissolved Solids	ppm	1000	N/A	142 (8/30/19)	134 (8/30/19)	144 (8/30/19)	Runoff/leaching from natural deposits
Secondary MCL	Turbidity	NTU	5	N/A	4.1 (7/03/19)	0.152 (8/14/19)	0.186 (9/18/19)	Monthly monitoring exceedances. Attributed to heavy water usage/turbulence in piping and well casing.
Secondary MCL	Turbidity	NTU	5	N/A	2.32 (8/30/19)	0.11 (8/30/19)	0.43 (8/30/19)	Soil runoff
		Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.						
Secondary MCL	Zinc	ppm	5	N/A	0.093 (8/30/19)	0.375 (8/30/19)	0.0457 (8/30/19)	Runoff/leaching from natural deposits; industrial wastes
State Required	Hardness	ppm	N/A	N/A	67.5 (8/30/19)	37.7 (8/30/19)	40.7 (8/30/19)	Runoff/leaching from natural deposits
State Required	Sodium	ppm	N/A	N/A	22.6 (8/30/19)	32.4 (8/30/19)	30.7 (8/30/19)	Runoff/leaching from natural deposits

Table 2 – Trichloroethylene (TCE) Sampling (Results above Detection Limit/2019)

Location	Contaminant	CCR Unit	MCL	PHG	Date of Sampling						Typical Sources
					1/30	2/27	3/20	4/24	5/15	6/05	
Well 4	Trichloroethylene	ppb	5.0	1.7	11.7	11.1	6.94	6.38	5.63	6.96	Discharge from metal degreasing sites and other factories
					7/03	8/19	9/18	10/16	11/19	12/19	
					6.28	4.53	4.19	4.5	3.83	3.45	

Table 3 – Lead and Copper (Calculated 10/30/2018- Report Due Every Three Years)

Contaminant	CCR Unit	PHG (MCLG)		AL	90th Percentile Value	Number of Sites Sampled	Number of Sites Exceeding AL	Typical Sources
Copper	ppb	300		1300	23.8	5	0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	ppb	0.2		15	21.2	5	1	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Table 4 – Disinfection byproducts and chlorine residual ranges in 2019

Contaminant	CCR Unit	MCL	PHG	Bldg. 150	Bldg. 157	Typical Sources
Total Trihalomethanes	ppb	80	n/a	5.57	6.04	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	n/a	1.14	1.17	