Water Quality Report

Boeing Palmdale - AFP42/Site 1
2022 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 AF Plant 42(AFP42)/Site 1 (note: the remainder of the document will refer to this site as Site 1 for simplicity). 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 2022 reporting period.

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

For additional information about water quality at AFP42/Site 1, please contact Mark Cuesta at 661-265-2181 (or e-mail mark.c.cuesta@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 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. Well 04 is not in use, however in CY2023 there are plans to reactive the well with more frequent monitoring of trichloroethylene. Well 04 is under The Division of Drinking Water review and final permit amendment consideration. Your water undergoes disinfection via chlorination to protect you against microbial contaminants. Site 1 does not have a connection with any publicly-owned water district sources. 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. The State last inspected this drinking water system in November 2020.

You may request a copy of the assessments by contacting:

Mr. David McElheny, Water Resource Control 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:

In general, drinking water sources (tap water and bottled water) may include water from rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. Sources of drinking water at Site 1 are limited to water 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 and scroll to "complete bottled water quality reports."

Some individuals 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 and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection of *Cryptosporidium* and other microbial contaminants are available by contacting 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 in water lines for several hours, you can minimize the potential lead exposure by running 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 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 kill viruses, including coronaviruses such as COVID-19, as well as bacteria and other pathogens.

Please be aware that COVID-19 is transmitted person to person and not through water, according to the USEPA https://www.epa.gov/coronavirus/coronavirus-and-drinking-water-and-wastewater. Drinking water systems that utilize groundwater sources such as Site 1 maintain protective physical measures including soil barriers to ensure that water sources are protected from pathogens and viruses. In addition, Site 1 uses chlorine disinfection to inactivate viruses, pathogens, and bacteria that may find their way into the water.

Site 1 Drinking Water Sampling Program:

Boeing maintains a comprehensive water quality sampling program at Site 1 that complies 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, 2A/B, 3, and 4 will provide you with data on the levels of contaminants found during routine testing conducted on the tap water on site. Only those substances measured above the detection level of reporting (DLR) are listed. Simply 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 concerns related to water quality sampling were monitored in 2022:

- 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 2B provides details related to monthly TCE monitoring performed by Boeing in 2022. TCE concentrations peaked in January and April at 3.1 ppb, and then gradually declined during the rest of the year with an average of 2.7 ppb. Results are documented in Table 2A. Note: Well 04 is currently not providing water to Site 1 potable water system. The USAF installed an additional monitoring just south of Well 04 in 2022.
- Per- and Polyfluoroalkyl Substances (PFAS) are a group of man-made chemicals that include Perfluorooctanoic acid (PFOA), Perfluorooctyl Sulfonate (PFOS), and many other chemicals. These chemicals are very persistent in the environment and in the human body; meaning they don't break down and can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects and drinking water can be a source of exposure in communities where these chemicals have contaminated water supplies. Such contamination is typically localized and associated with a specific facility, for example, an industrial facility, airfield or other locations where PFAS chemicals were used for fire-fighting. California instituted State-wide PFAS monitoring requirements in 2020 and Boeing voluntarily performed sampling of the three drinking water wells at Site 1 in July 2020. All sample locations at Site 1 were

'Non-Detect' for PFAS in 2022. Boeing will continue to perform quarterly PFAS monitoring in 2023 until determined otherwise by The Division of Drinking Water.

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 at testing limit.
NTU: Nephelometric Turbidity Unit. 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 the rate of radioactive decay of radon
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:

Please be aware a majority of the contaminants are on a 3-year monitoring frequency

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 (California MCL)	ppb	50	0.02	10.9 (9/10/20)	7.09 (9/10/20)	6.05 (6/10/20)	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 (9/29/21)	2.96 (9/29/21)	1.55 (9/29/21)	Discharges from industrial manufacturers; erosion of natural deposits
Inorganic	Arsenic	ppb	10	10	3.19 (9/10/20)	2.27 (9/10/20)	1.07 (9/10/20)	Discharges from industrial manufacturers; erosion of natural deposits
Volatile Organics	VOCs (Except TCE)	ppm	N/A	N/A	ND (12/8/22)	ND (12/8/22)	ND (12/8/22)	Paint and solvent use, fuels. Also see Table 2A/B.
Inorganic	Nitrate (as N)	ppm	10	10	ND (12/1/21)	ND (12/1/21)	0.348 (7/6/22)	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Secondary MCL	Chloride	ppm	500	N/A	2.5 (9/10/20)	2.3 (9/10/20)	2.5 (9/10/20)	Runoff/leaching from natural deposits; seawater influence
Secondary MCL	Color	Units	15	N/A	ND (9/10/20)	ND (9/10/20)	3 (9/10/20)	Naturally-occurring organic materials

Classification	Contaminant	CCR Unit	MCL	PHG (MCLG)	Well 01 (Date of Sampling)	Well 03 (Date of Sampling)	Well 04 (Date of Sampling)	Typical Source
Secondary MCL	Iron	ppb	300	N/A	ND (9/10/20)	18.6 (9/10/20)	272 (9/10/20)	Leaching from natural deposits; industrial wastes
Secondary MCL	Manganese	ppb	50	N/A	ND (9/10/20)	ND (9/10/20)	5.78 (9/10/20)	Leaching from natural deposits
Secondary MCL	Odor	Units	3	N/A	ND (9/10/20)	ND (9/10/20)	ND (9/10/20)	Organic (bacterial) buildup, aesthetic quality
Secondary MCL	Silver	ppb	100	N/A	ND (9/10/20)	ND (9/10/20)	ND (9/10/20)	Industrial discharges
Secondary MCL	Sodium	ppm	N/A	N/A	34.5 (9/10/20)	29.5 (9/10/20)	24.7 (9/10/20)	Runoff/leaching from natural deposits
Secondary MCL	Total Dissolved Solids	ppm	1000	N/A	145 (9/10/20)	142 (9/10/20)	156 (9/10/20)	Runoff/leaching from natural deposits
Secondary MCL	Turbidity	NTU	5	N/A	0.100 (9/10/20)	0.120 (9/10/20)	3.2 (9/10/20)	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	ND (9/10/20)	ND (9/10/20)	ND (9/10/20)	Runoff/leaching from natural deposits; industrial wastes
State Required	Hardness	ppm	N/A	N/A	41 (9/10/20)	44 (9/10/20)	65 (9/10/20)	Runoff/leaching from natural deposits
Proactive Stance	PFAS	ppt	N/A	70	ND (6/16/22)	ND (6/16/22)	ND (6/16/22)	Runoff from fire-fighting foam used in aircraft fires.

Table 2A – Trichloroethylene (TCE) Sampling (Results above Detection Limit/2022)

Location	Contaminant	CCR Unit	MCL	PHG	Date of Sampling						Typical Sources
					1/19	2/17	3/30	4/20	5/19	6/16	
Well 4	Trichloroethylene	ppb	5.0	1.7	3.1	2.7	2.9	3.1	2.9	2.6	Discharge from metal degreasing sites and other factories
					7/6	8/31	9/22	10/20	11/17	12/8	
					3.0	2.7	3.0	2.7	2.5	2.2	

Table 2B – Trichloroethylene (TCE) Sampling (Results above Detection Limit/2021)

Location	Contaminant	CCR Unit	MCL	PHG	Date of Sampling						Typical Sources
					Jan	2/26	3/24	4/21	5/12	6/16	
Well 4	Trichloroethylene	ppb	5.0	1.7	None	4.15	3.88	3.54	3.13	2.3	Discharge from metal degreasing sites and other factories
					Jul	8/11	9/08	10/20	11/17	12/01	
					None	2.2	3.1	3.5	3.1	3.1	

Table 3 – Lead and Copper (Calculated 2021- 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	55.9	6	0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	ppb	0.2	15	2.61	6	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Table 4 – Disinfection byproducts and chlorine residual ranges in 2022

Contaminant	CCR Unit	MCL	PHG	Bldg. 150	Bldg. 157	Typical Sources
Total Trihalomethanes	ppb	80	N/A	3.31	0.57	Byproduct of drinking water disinfection. Date of sampling: 9/22/2022
Haloacetic Acids	ppb	60	N/A	ND	1.4	