

Annual
WATER
QUALITY
REPORT

Reporting Year 2013



Presented By
City of Yukon / Veolia Water North America

PWS ID#: OK2000910

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the first and third Tuesdays of each month beginning at 7:30 pm in the Centennial Building located at 12 South Fifth Street, Yukon.

Where Does My Water Come From?

The City of Yukon customers are fortunate because we enjoy an abundant water supply from two sources. Our water sources are groundwater from Garber Wellington Aquifer and purchased water provided by Oklahoma City (OKC). The aquifer supplies an average of approximately 2.6 million gallons of groundwater per day to our residents. To meet the new arsenic regulations, Yukon water is blended with OKC Water before the entry point of Yukon. Depending on the month, 60% of the total water supply for Yukon is OKC Water. This process allows the City of Yukon to remain in compliance with federal regulations.

Lead in Home Plumbing

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. We are 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 www.epa.gov/safewater/lead.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (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 at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Source Water Assessment

The City of Yukon and Veolia Water has conducted a Source Water Assessment and Protection Ground Water Sources Report that was submitted to the Oklahoma Department of Environmental Quality in 2002. The report indicated that the Qualitative Susceptibility Rating (QSR) was low. This report is on file with Veolia Water and may be reviewed at 501 West Wagner Road, Yukon.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Gary Giddings, Project Manager, at (405) 354-6245. Veolia Water is located at 501 W. Wagner Rd in Yukon.

About Our Violation

Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period January 1, 2013, to March 31, 2013. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Any UCMR3 detections are shown in the data tables in this report.

REGULATED SUBSTANCES									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	City of Yukon		Oklahoma City-Draper WTP		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Alpha Emitters (pCi/L)	2009	15	0	5.98	3.8–5.98	<0.4744 ¹	0–2.373 ¹	No	Erosion of natural deposits
Antimony (pCi/L)	2007	6	6	2.9	2.9–2.9	NA	NA	No	Discharge from petroleum refineries; Fire retardants; Ceramics; Electronics; Solder
Arsenic (ppb)	2013	10	0	13	0–12.1	<2	0–2	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2007	2	2	0.15	0.15–0.15	0.057 ²	0.032–0.057 ²	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters ³ (pCi/L)	2009	50	0	2.28	0–2.28	2.611 ¹	2.811–6.824 ¹	No	Decay of natural and man-made deposits
Chloramines (ppm)	2013	[4]	[4]	NA	NA	3.36	2.83–3.91	No	Water additive used to control microbes
Chlorine (ppm)	2013	[4]	[4]	1	0–1	NA	NA	No	Water additive used to control microbes
Combined Radium (pCi/L)	2012	5	0	NA	NA	<0.495	<0.495–0.980	No	Erosion of natural deposits
Fluoride (ppm)	2013	4	4	0.91	0.49–0.91	0.95	0.74–0.95	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA]–Stage 2 (ppb)	2013	60	NA	32	0–34.1	38.5	15.0–53.1	No	By-product of drinking water disinfection
Nitrate (ppm)	2013	10	10	0.48	0.48–0.48	0.385	0–0.464	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	35	17.5–37.1	67.7	38.5–85.9	No	By-product of drinking water disinfection
Thallium (ppb)	2007	2	0.5	1.2	1.2–1.2	NA	NA	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Total Coliform Bacteria (% positive samples)	2013	5% of monthly samples are positive	0	0	NA	1	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2013	TT	NA	NA	NA	0.519	0.519–1.85	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2013	TT	NA	NA	NA	0.34	<0.30–0.34	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT=95% of samples <0.3 NTU	NA	NA	NA	99.5	NA	No	Soil runoff
Uranium (pCi/L)	2009	27	0	3.2	3.2–3.2	<1 ¹	0–1 ¹	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	City of Yukon				Oklahoma City-Draper WTP			
		AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	1.3	0.0329	0/30	0.083	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2012	15	0	0	1/30	2.53	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING REGULATION 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	City of Yukon		Oklahoma City-Draper WTP		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Chlorate (ppb)	2013	NA	NA	36.4	<20.0–36.4	By-Product of drinking water disinfection, making of dyes, explosives, matches, printing fabrics, and in paper pulp processing
Chromium (ppb)	2013	10.2	0.200–10.2	0.428	<0.200–0.471	Naturally occurring, By-Product or making steel and other alloys, plating, dyes and pigments, leather and wood preservation
Chromium, Hexavalent (ppb)	2013	8.15	1.20–8.15	0.141	<0.030–0.471	Naturally occurring, By-Product or making steel and other alloys, plating, dyes and pigments, leather and wood preservation
Molybdenum (ppb)	2013	NA	NA	2.78	<1.00–3.24	Naturally occurring, By-product of making steel and other alloys, lubricants, dyes and pigments, fertilizers.
Strontium (ppb)	2013	96.3	0.300–96.3	295	42.9–763	Naturally occurring, By-product of making electronics, fireworks.
Vanadium (ppb)	2013	41.6	0.200–41.6	2.78	<0.200–7.50	Naturally occurring, By-product of making steel alloys, chemical manufacturing, ceramics and batteries.

¹ Sampled in 2012.
² Sampled in 2013.
³ The MCL for beta particles is 4 mrem/year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
⁴ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a 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): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

NTU (Nephelometric Turbidity

Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.