

# CONTROL GORGE POWER PLANT

## 2015 WATER QUALITY REPORT



The 2015 Water Quality Report for Control Gorge Power Plant system was prepared by the Los Angeles Department of Water and Power (LADWP). The report gives information about drinking water at the Control Gorge Power Plant during the 2015 calendar year. The data are compared to the current State and Federal Standards. Only those constituents that were detected are listed. This report is required by the Water Resources Control Board of the State of California (State Board) and was prepared in accordance with the Division of Drinking Water (DDW) guidelines.

### THE BOTTOM LINE

The water provided to the Control Gorge Power Plant system meets all state and Federal drinking water requirements. Only the following constituents with primary standards were detected at low levels in the water supplied to Control Gorge system: arsenic, fluoride, nitrate, and radioactivity. The levels of these constituents were far below the established maximum contaminant levels (MCLs), which are the health protective standards set by the United States Environmental Protection Agency (USEPA) and the DDW. Sampling and analysis for perchlorate was missed in 2015. Historical data have shown that this contaminant has not been detected in the Control Gorge water system; nonetheless, sampling and analysis for perchlorate will be conducted in 2016 and annually thereafter.

For more information on these constituents, please refer to the Table 1 "Primary Drinking Water Constituents Found in the Water". The presence of these constituents in water does not necessarily indicate that the water poses a health risk. The DDW allows us to monitor for certain contaminants less than once per year because the concentrations of these constituents do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

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

## WHERE DOES MY WATER COME FROM?

The term “source water” describes where LADWP obtains the water you drink. All drinking water, tap or bottled, comes from either surface water or groundwater sources. Surface water sources include rivers, lakes, streams, ponds, or reservoirs. Groundwater sources are springs or wells.

Control Gorge Power Plant receives natural spring water. The domestic water supply comes exclusively from Bircham Canyon Spring, an artesian well located along Bircham Canyon Road near the plant. It is disinfected with chlorine to ensure bacterial quality of the water. It receives filtration treatment to remove turbidity and arsenic.

## WHY IS DRINKING WATER MONITORED AND TREATED?

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 animal or human activity.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling from the Safe Drinking Water Hotline (800 426-4791).

In order to ensure that tap water is safe to drink, the USEPA and the State board prescribe regulations that limit the amount of certain contaminants in water provided by public water system. DDW regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Contaminants that may be present in source waters include:

- Microbial contaminants such as viruses and bacteria, that 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 run-off, 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 run-off, and residential uses.

- Organic chemical contaminants including synthetic and volatile organics that are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water run-off, agricultural application, and septic systems.
- Radioactive contaminants which can be naturally occurring or be a result of oil and gas production and mining activities.

## TERMS USED IN THIS REPORT

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

DLR (Detection Limit for Reporting Purposes): The DLR is the lowest level at which all DDW certified laboratories can accurately and reliably detect a compound. The DLR provides a standardized basis for reporting purposes.

MCL (Maximum Contaminant Level): 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 MCL's are set to protect the odor, taste, and appearance of drinking water.

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 are set by the U.S. Environmental Protection Agency (USEPA).

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.

NL (Notification Levels) - State: Health-based advisory levels established by DDW for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply.

PHG (Public Health Goal) - State: 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.

**PDWS (Primary Drinking Water Standards):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**SDWS (Secondary Drinking Water Standards):** MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

**Variations and Exemptions:** State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

## **MONITORING OF REGULATED CONSTITUENTS**

There are over 110 regulated constituents Utilities monitor for each constituent at varying frequencies based on the type of constituent and the type of source water. For example, groundwater sources are generally sampled once every three years. Those constituents that pose acute risk require more frequent monitoring. Nitrate sampling is required annually, and bacteriological sampling is required monthly. Since most constituents are not detected in our water, only those constituents that are detected are listed in the tables shown.

### **Perchlorate**

Perchlorate samples were not taken in 2015. Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that use, store, or dispose of perchlorate and its salts.

Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse effects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.

As stated previously, historical analytical data appear to show that perchlorate has not been detected in the Control Gorge system. Nonetheless, annual samples for this contaminant will be taken in 2016 and will continue annually thereafter as required.

## **Arsenic**

The current EPA standard for arsenic in drinking water is 10 ppb. The California Office of Environmental Health Hazard Assessment adopted a Public Health Goal of 0.004 ppb in April 2004. In November 2008, CDPH adopted the EPA arsenic standard as the new State drinking water standard for arsenic. Arsenic compliance is based on a running annual average. In 2015, the average amount of arsenic was 1.7 ppb.

### **Lead in Drinking Water**

In 2016 we will again be asking for your assistance in the residential tap water sampling, as required by the Lead and Copper Rule (LCR). If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Lead in your drinking water is primarily from materials and components associated with service lines and home plumbing. The Control Gorge Power Plant is responsible for providing high quality drinking water, and can make system improvements as necessary. 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

### **Turbidity**

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites such as Cryptosporidium and Giardia that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

### **Unregulated Constituents**

There are constituents found in drinking water that are not yet regulated. Some of these “unregulated constituents” are monitored because they could be candidates for future regulations or are of interest to our consumers.

**CONTROL GORGE POWER PLANT – 2015 CALENDAR YEAR**

**TABLE 1 – Health-Based Primary Drinking Water Contaminants Detected**

Constituents/ Contaminants	Units	Control Gorge Water Quality		State Primary Std (MCL) or [MRDL]	MEETS PRIMARY STD?	State PHG or Federal [MRDLG] or (MCLG)	Major Source in Drinking Water
		Range	Average				
Alpha Emitters <sup>a</sup>	pCi/L	4.6	4.6	15	YES	(0)	Erosion of natural deposits
Arsenic	µg/L	1.1-2.2	1.7	10	YES	0.004	Natural hot springs; erosion of natural deposits
Beta Emitters <sup>a</sup>	pCi/L	4.3	4.3	50	YES	(0)	Decay of natural deposits
Chlorine Residual, Free	mg/L	2.29	2.29	[4]	YES	[4]	Disinfectant
Copper (at-the-tap) <sup>b</sup>	µg/L	Number of samples exceeding AL = 0 in 5	90 <sup>th</sup> Percentile value = 187	AL=1300	YES	300	Internal corrosion of household water plumbing systems
Fluoride <sup>c</sup>	mg/L	0.78	0.78	2	YES	1	Erosion of natural deposits
Lead (at-the-tap) <sup>b</sup>	µg/L	Number of samples exceeding AL = 0 in 5	90 <sup>th</sup> Percentile value = 8.1	AL=15	YES	0.2	Internal corrosion of household water plumbing systems
Nitrate (NO <sub>3</sub> )	mg/L	1.6	1.6	45	YES	2	Erosion of natural deposits; run-off and leaching from fertilizer use
Turbidity <sup>c</sup>	NTU	99.9%	0.47	TT	YES	TT	Soil runoff
Uranium <sup>a</sup>	pCi/L	5.63	5.63	20	YES	1	Erosion of natural deposits

**TABLE 2 - Aesthetic-Based Secondary Drinking Water Contaminants Detected**

Constituents / Contaminants	Units	Control Gorge Water Quality		Secondary MCL	MEETS SECONDARY STANDARD?	Major Source in Drinking Water
		Range	Average			
Chloride <sup>d</sup>	mg/L	30	30	500	YES	Runoff/leaching from natural deposits
Color <sup>d</sup>	Units	4	4	15	YES	Naturally-occurring organic materials
Conductivity <sup>d</sup>	µS/cm	379	379	1600	YES	Natural constituents
Iron <sup>d</sup>	mg/L	178	178	300	YES	Leaching from natural deposits
Odor <sup>d</sup>	Units	ND	ND	3	YES	Chlorine
pH <sup>d</sup>	Units	7.71	7.71	6.5 - 8.5	YES	Natural constituents
Sulfate <sup>d</sup>	mg/L	16.3	16.3	500	YES	Runoff/leaching from natural deposits
Turbidity <sup>c</sup>	NTU	0.47	0.47	TT	YES	Soil runoff
Total Dissolved Solids (TDS)	mg/L	240	240	1000	YES	Runoff/leaching from natural deposits

## CONTROL GORGE POWER PLANT – 2015 CALENDAR YEAR

**TABLE 3 - Unregulated Drinking Water Constituents Detected**

Constituents / Contaminants	Units	Control Gorge Water Quality		Major Source in Drinking Water
		Range	Average	
<b>Alkalinity, Bicarbonate</b>	mg/L	151	151	Natural constituent
<b>Boron NL = 1000</b>	µg/L	833	833	Erosion of natural deposit
<b>Calcium</b>	mg/L	21.7	21.7	Natural constituent
<b>Hardness, total (as CaCO<sub>3</sub>)</b>	mg/L	69	69	Natural constituent
<b>Magnesium</b>	mg/L	4.4	4.4	Natural constituent
<b>Phosphate (as Phosphorus)</b>	mg/L	0.07	0.07	Erosion of natural deposits; agricultural runoff
<b>Potassium</b>	mg/L	3.9	3.9	Natural constituent
<b>Silica</b>	mg/L	59	59	Erosion of natural deposit
<b>Sodium</b>	mg/L	51.5	51.5	Natural constituent

### Footnotes

- (a) Radioactivity is tested once every six years, with the most recent sample being tested in 2014.
- (b) At-the-tap monitoring was conducted in 2013 as required under the Lead and Copper Rule. Control Gorge Power Plant is in compliance since the 90<sup>th</sup> percentile concentration for all samples of lead and copper were below their respective action levels.
- (c) Turbidity is monitored as an indicator of filtration performance. Systems must report the highest single measurement and the lowest monthly percentage of samples meeting the requirements specified for that technology.
- (d) These constituents are tested once every 9 years, with the most recent sample being taken in 2013.

### Abbreviations

- mg/L** milligrams per liter or parts per million (ppm)
- µg/L** micrograms per liter or parts per billion (ppb)
- NTU** Nephelometric Turbidity Units; Turbidity is a measure of the cloudiness of the water. It is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.
- pCi/L** picoCuries (units of radioactivity) per Liter
- µS/cm** micro Siemens per centimeter
- ND** Not detectable at testing limit

For more information regarding this report, please call Mr. Michael Mercado of the Water Quality Division at (213) 367-0395.