

2023 Consumer Confidence Report

Water System Information

Water System Name: Lockheed Martin Space Systems (LMSS)

Report Date: 6/12/2024

Type of Water Source(s) in Use: Surface Water: Lake/Reservoir

Name and General Location of Source(s): Mill Creek Reservoir; CA State No. 630-0 – Located on Lockheed Martin property at 16020 Empire Grade Road, Santa Cruz, California

Drinking Water Source Assessment Information: The water system is maintained and monitored solely for the constituents associated with the operations and functions of the site and is considered “Non Vulnerable”. A certified Sanitary Survey was completed in 2019 for the recent major construction to the water treatment center. See the contact listed below to obtain a copy of the last Sanitary Survey.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: No scheduled meetings – customer communications provided via ad hoc all hand meetings and informational updates delivered via email as needed

For More Information, Contact: Tim McNulty – (831) 425-6009

About This Report

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 to December 31, 2023 and may include earlier monitoring data.

Importance of This Report Statement in Five Non-English Languages (Spanish, Mandarin, Tagalog, Vietnamese, and Hmong)

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [Enter Water System's Name] a [Enter Water System's Address or Phone Number] para asistirlo en español.

Language in Mandarin: 这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 [Enter Water System Name]以获得中文的帮助: [Enter Water System's Address][Enter Water System's Phone Number].

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa [Enter Water System's Name and Address] o tumawag sa [Enter Water System's Phone Number] para matulungan sa wikang Tagalog.

Language in Vietnamese: Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ [Enter Water System's Name] tại [Enter Water System's Address or Phone Number] để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau [Enter Water System's Name] ntawm [Enter Water System's Address or Phone Number] rau kev pab hauv lus Askiv.

Terms Used in This Report

Term	Definition
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 (U.S. EPA).
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.
Primary Drinking Water Standards (PDWS)	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
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.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Secondary Drinking Water Standards (SDWS)	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.
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.
ND	Not detectable at testing limit.
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter (µg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
ppq	parts per quadrillion or picogram per liter (pg/L)
pCi/L	picocuries per liter (a measure of radiation)

Sources of Drinking Water and Contaminants that May Be Present in Source Water

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 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, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that 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, that 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, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

About Your Drinking Water Quality

Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Table 1. Sampling Results Showing the Detection of Coliform Bacteria

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0 in 2023	0	TT (a)	0	Naturally present in the environment
<i>E. coli</i>	0 in 2023	0	TT (b)	0	Human and animal fecal waste

(a) For a water system collecting fewer than 40 samples per month: one positive monthly sample.
 (b) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

Table 2. Sampling Results Showing the Detection of Lead and Copper

Lead and Copper	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	6/21/2023	10	11	1	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
	9/20/2023	10	3.1	0			
Copper (ppm)	6/21/2023	10	0.0385	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	9/20/2023	10	0.0459	0			

Table 3. Sampling Results for Sodium and Hardness

Chemical or Constituent (reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	10/21/2021	10		None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	10/21/2021	68		None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

Table 4. Detection of Contaminants with a Primary Drinking Water Standard

Chemical or Constituent (reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Inorganic Contaminants						
Barium (mg/L)	11/16/2023	0.0362		1	2	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Copper (mg/L)	11/16/2023	0.0026		AL = 1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Selenium (µg/L)	11/16/2023	1		50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Radioactive Contaminants						
Gross Alpha Particle Activity (pCi/L)	11/8/2017	0.098		15	(0)	Erosion of natural deposits
Total Radium (pCi/L) (for nontransient-noncommunity water systems)	11/16/2023	0.498		5	N/A	Erosion of natural deposits
Uranium (pCi/L)	7/21/2020	1		20	0.43	Erosion of natural deposits

Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors						
TTHMs [Total Trihalomethanes] (µg/L)	2023	46	23-54	80	N/A	Byproduct of drinking water disinfection
HAA5 [Sum of 5 Haloacetic Acids] (µg/L)	2023	52	16-65	60	N/A	Byproduct of drinking water disinfection
Chlorine (mg/L)	2023	1.32	0.31-1.32	[4.0]	[4]	Drinking water disinfectant added for treatment

Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	Typical Source Of Contaminant
Chloride (mg/L)	10/21/2021	13		500	Runoff/leaching from natural deposits; seawater influence
Color (Units)	10/21/2021	24		15	Naturally-occurring organic materials
Manganese (µg/L)	10/21/2021	380		50	Leaching from natural deposits
Specific Conductance (µS/cm)	10/21/2021	220		1,600	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	10/21/2021	6.6		500	Runoff/leaching from natural deposits; industrial wastes
TDS (mg/L)	10/21/2021	130		1,000	Runoff/leaching from natural deposits
Zinc (mg/L)	10/21/2021	0.012		5	Runoff/leaching from natural deposits; industrial wastes

Additional General Information on Drinking Water

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 the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

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. U.S. EPA/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).

Lead-Specific Language: 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. Lockheed Martin Space Systems 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.

Manganese-Specific Language: Manganese exposures resulted in neurological effects. High levels of manganese in people have been shown to result in adverse effects to the nervous system.

For Systems Providing Surface Water as a Source of Drinking Water

Table 6. Sampling Results Showing Treatment of Surface Water Sources

Treatment Technique ^(a) (Type of approved filtration technology used)	Direct Media Filtration
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.2 NTU in 95% of measurements in a month. 2 – Not exceed 0.2 NTU for more than eight consecutive hours. 3 – Not exceed 0.2 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100% - All samples met Turbidity Performance Standards.
Highest single turbidity measurement during the year	0.096
Number of violations of any surface water treatment requirements	7

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

Table 7. Violation of Surface Water TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
Citation # 02_05_23C_047				
Surface Water Treatment Rule #02_05_17R_004	Utilizing an unapproved surface water treatment process and did not provide all the required documentation to complete the permit application, specifically an operations plan.	8/3/2017 – 3/28/2024	LMSS submitted a compliance action plan to build a new treatment plant in 2017. LMSS constructed the plant and submitted the permit application in 2020. LMSS submitted an operations plan in December 2023 and an updated plan based on regulatory comments in March 2024.	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Surface Water Treatment Rule	Treated surface water is being distributed to customers and the disinfection residual is not being monitored in accordance with regulations.	8/3/2017 - Current	LMSS has calibrated the clearwell chlorine analyzer and installed an automated isolation valve on the clearwell. LMSS is working on updating system controls to tie in the analyzer and isolation valve so the valve will automatically close if chlorine levels are out of range.	
Lead and Copper Rule	An adequate water quality evaluation to determine and recommend optimal Corrosion Control Treatment (CCT) was not conducted by March 10, 2023, as required by the letter issued by State on November 23, 2022.	3/10/2023 – 3/19/2024	LMSS submitted a CCT evaluation and recommendation to the State Water Board on March 19, 2024.	

Lead and Copper Rule #02_05_22C_068	Water Quality Parameters (WQP) samples from January 1, 2023 through June 30, 2023 were not submitted to the State Water Board database within 10 days following the monitoring period.	7/10/2023 – Current	LMSS collected WQP samples in January 2024 and will continue to ensure all required sample results are reported within 10 days following the monitoring period.	Health effects unknown
Disinfection Byproduct Rule #02_05_21C_028	Quarterly TOC, DOC, and SUVA samples from the source water are not being collected in accordance with the CAP submitted in July 2022.	7/15/2022 – 1/9/2024	LMSS has updated its sampling plan for the facility and is now conducting quarterly TOC, DOC, and SUVA sampling of the source and treated water.	Health effects unknown
	Disinfection byproduct samples from Quarter 2 (April-June) 2023 and Quarter 3 (July-September) 2023 were not submitted to the State Water Board database within 10 days following the monitoring period.	7/10/2023 – 10/10/2023	Disinfection byproduct samples were collected as required and were uploaded to the State Water Board database. LMSS will continue to ensure all required sample results are reported within 10 days following the monitoring period.	
	Public notifications for the HAA5 MCL exceedance, surface water treatment violation for operating a treatment plant without a permit, and the lead exceedance were not sent to customers for the Quarter 1 (January-March) 2023, Quarter 2 (April-June) 2023, and Quarter 3 (July-September) 2023.	1/1/2023 – 3/7/2024	Public notification was made to consumers on March 7, 2024, via email and postings at the facility. Additionally, the required certification of completion was submitted to the state. LMSS has updated its compliance calendar to include this quarterly deliverable.	

Summary Information for Operating Under a Variance or Exemption

Since March of 2020, all drinking water being supplied is through the procurement of bottled water. The treatment facility water is currently only being used for non-potable water fixtures and fire suppression demands. However, the treatment facility has continued with all required sampling and testing outlined in the facilities sampling schedule. The water quality sampling and laboratory results for bacteriological presence demonstrates that the water treatment plant is producing water quality that meets regulatory criteria for drinking water.

How to Report Issues/Concerns

As a drinking water supplier, committed to providing all employees, contractors and visitors with high quality drinking water, we want to hear from you. If you have compliments, questions, or concerns about the quality of your water please use the resources available to notify ESH. Urgent high priority issues can be called in using the ESH Hotline (408-742-7215) or via radio. In the event of an emergency, please dial 911 from an in-plant phone. All other inquiries can be submitted through the OSEE webpage <https://space-internalus.p.external.lmco.com/sites/sscesh/Pages/Ask-OSEE.aspx>. All questions and complaints will be recorded, investigated and resolved in a timely manner. If you are experiencing a water outage, please contact FO&S immediately via LM Buildings as a corrective maintenance request or via email or radio.