# 2022 Consumer Confidence Report

## Water System Information

Water System Name: Kern Oil & Refining

Report Date: June 27, 2023

Type of Water Source(s) in Use: Ground Water Wells

Name and General Location of Source(s): Well #2 7724 E. Panama Land, Bakersfield, 93307

Drinking Water Source Assessment Information: A Source assessment was conducted on well #2 in December 2001. The source is vulnerable to: petroleum pipelines, fleet/truck/bus terminal and machine shops.

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| Public notification is made by posting, notices in employee gathering areas throughout the facility. Requests for a copy of the assessment, comments, and or concerns regarding potable water can be directed to Kern’s Environmental Department at 661-845-0761 |

For More Information, Contact: Jake Padilla, (661) 845-0761

## 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, 2022 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 Kern Oil and Refining a 661-845-0761 para asistirlo en español.

## Terms Used in This Report

| **Term** | **Definition** |
| --- | --- |
| Level 1 Assessment | A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. |
| Level 2 Assessment | A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions. |
| 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, 5, 6, and 8 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 2. Sampling Results Showing the Detection of Lead and Copper

Complete if lead or copper is detected in the last sample set.

| **Lead and Copper**  | **Sample Date** | **No. of Samples Collected** | **90th Percentile Level Detected** | **No. Sites Exceeding AL** | **AL** | **PHG** | **No. of Schools Requesting Lead Sampling** | **Typical Source of****Contaminant** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lead (ppb) | 9/2/22 | 5 | 0.0005.005 | 0 | 15 | 0.2 | Notapplicable | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | 8/9/2/22/19 | 5 | 0.235 | 0 | 1.3 | 0.3 | Notapplicable | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

Table 2. Sampling Results for Sodium and Hardness

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chemical or Constituent (and reporting units)** | **Sample Date** | **Level Detected** | **Range of Detections** | **MCL** | **PHG (MCLG)** | **Typical Source of Contaminant** |
| Sodium (ppm) | 7/25/19 | 49 | 49 | None | None | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 7/25/19 | 110 | 110 | None | None | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring |

Table 3. Detection of Contaminants with a Primary Drinking Water Standard

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| --- | --- | --- | --- | --- | --- | --- |
| **Chemical or Constituent****(and****reporting units)** | **Sample Date** | **Level Detected** | **Range of Detections** | **MCL [MRDL]** | **PHG (MCLG) [MRDLG]** | **Typical Source of Contaminant** |
| \*Nitrate | 2022 | 0.46 | 0.32 | 10 | 10 | Runoff & leaching from fertilizer use; leaching from septic tanks & sewage; erosion of natural deposits |
| \*Arsenic | 2022 | 11.45 | 7.8 -25 | 10 | 0.004 | Erosion of natural deposit; runoff from orchards; glass & electronics |
| Barium (mg/L) | 8/12/21 | 0.61 | 0.61 | 1 | 2 | Discharge of oil drilling wastes &from metal refineries; erosion of natural deposits |
| Fluoride(mg/L) | 5/9/22 | 0.28 | 0.28 | 2.0 | 1 | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer & aluminum factories |
| Gross Alpha | 6/29/21 | 3.85 | 3.85 | 15 | (0) | Erosion of natural deposits |
| Chlorine (mg/L) | 2022 | 0.86 | 0.09 – 0.98 | 4.0 | 4 | Drinking water disinfectant added for treatment |

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

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| --- | --- | --- | --- | --- | --- | --- |
| **Chemical or Constituent (and reporting units)** | **Sample Date** | **Level Detected** | **Range of Detections** | **SMCL** | **PHG (MCLG)** | **Typical Source****of****Contaminant** |
| Chloride | 5/9/22 | 28 | 28 | 500 | None | Runoff/leaching from natural deposits; seawater influence |
| Sulfate | 5/9/22 | 36 | 36 | 500 | None | Runoff/leaching from natural deposits; industrial wastes |
| Electrical Conductivity (EC) | 5/9/22 | 409 | 409 | 1,600 | None | Substances that form ions when in water; seawater influence |
| Color | 5/9/22 | 1.0 | 1.0 | 15 Units | None | Naturally-occurring organic material |
| Turbidity | 5/9/22 | 5.3 | 5.3 | 5 Units | None | Soil Runoff |
| Iron | 5/9/22 | 610 | 610 | 300 | None | 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. Kern Oil & Refining 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. [Optional: 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>.

### Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

Table 5. Violation of a MCL, MRDL, AL, TT or Monitoring Reporting Requirement

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| --- | --- | --- | --- | --- |
| **Violation** | **Explanation** | **Duration** | **Actions Taken to Correct Violation** | **Health Effects Language** |
| Arsenic MCL | Arsenic at well is over the MCL | On Going | Arsenic removal system. Arsenic samples are collected twice a month and the water provided through the system is below the MCL | See Below |
| Nitrate | Well # 2 annual sample was not collected | 2022 | Sample was collected on 3/2/23 to bring system back into compliance | Infants below the age of six months who drink water containing nitrates in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant’s blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women. |

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| *Arsenic:* While you drinking water meets the federal and state standard for arsenic, it does contain low level of arsenic. The arsenic standard balances the current understanding of arsenic’s possible health effects against the cost of removing arsenic from drinking water. Th U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. |

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the calendar year 2022, we did not monitor for Nitrate from the well 2 and therefore, cannot be sure of the quality of your drinking water during that time. However, sample was collected in February of 2023 Non-detect.