

Consumer Confidence Report (CCR)

Last year, arsenal tap water met all EPA and state drinking water health standards. The Rock Island Arsenal water treatment plant safeguards its water supplies and our system had no violation of a contaminant level or any other water quality standard. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. For additional information on the Rock Island Arsenal water system, please contact Mr. Chuck Swynenberg, CEMVR-OD-AE, extension 2-2445 or Mr. Steve Robinette, RIIS, extension 2-5403.

The Rock Island Arsenal uses surface water from the Mississippi River. The water intake is on the north side of the island near building 9. The arsenal also has a 1,500 foot underground deep well near the water treatment plant that can be used as a water source in a time of emergency. The deep well was not used to provide any water for the potable water distribution system during the past year.

The sources for drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. The Illinois EPA is preparing a source water assessment for the northern portion of the Mississippi River and surrounding watershed. The assessment will inform communities and drinking water systems about contaminants or potential contaminants that may negatively impact drinking water quality. The assessment has not been completed, but will contain similar information on drinking water contaminants. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and radioactive materials, and pick up substances resulting from the presence of animals or human activity. Possible contaminants consist of:

1. Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
2. Inorganic contaminants such as salts and metals, which may be naturally occurring result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
3. Pesticides and herbicides which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
4. 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.
5. Radioactive contaminants which may be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

The “Water Quality Data” table identifies the highest level of each detected contaminant and the range of levels for that contaminant found during the CCR reporting year for the Rock Island Arsenal. The “Non-detected Contaminants” table lists all contaminants that were monitored for, but not detected, during the CCR reporting period.

1998 Water Quality Data

Definitions: **MCLG**: Maximum Contaminant Level Goal, or 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. **MCL**: Maximum Contaminant Level, or 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. **AL**: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. **TT**: Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.

Abbreviations: **nd** – not detected at testing limits. **n/a** – not applicable. **ppm** – parts per million or milligrams per liter. **ppb** – parts per billion or micrograms per liter. **ppt** – parts per trillion, or nanograms per liter. **ppq** – parts per quadrillion, or picograms per liter. **NTU** Nephelometric Turbidity Unit, used to measure cloudiness in drinking water. **%<0.5 NTU** – Percent samples less than 0.5 NTU. **MFL** – Million fibers per liter, used to measure asbestos concentration. **mrem/yr** – millirems per year, used to measure radiation absorbed by the body. **pCi/l** – picocuries per liter, used to measure radioactivity. **# pos/mo** – number of positive samples per month. **%pos/mo** – percent positive samples per month.

In most cases, the “**Level Found**” column represents an average of sample results data collected during the CCR calendar year. The “**Range of Detections**” column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year. If a date appears in the “**Date of Sample**” column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the CCR calendar year.

Contaminant (units)	MCLG	MCL	Level found	Range of detections	Violation	Date of Sample	Typical Sources of Contaminant
Microbial Contaminants							
Turbidity (%<0.5 NTU)	n/a	TT	100	100 - 100			Soil runoff
Turbidity (NTU)	n/a	TT=5NTU max	0.48	n/a			Soil runoff
Inorganic contaminants							
Barium (ppm)	2	2	0.021	.021 - .021			Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Lead (ppb)	0	AL=15	5	1 exceeding AL		9/10/96	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate (as nitrogen) (ppm)	10	10	3	3 - 3			Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate & nitrite (ppm)	10	10	3	3 - 3			Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Volatile Organic Contaminants							
TTHMs (total trihalomethanes) (ppb)	n/a	100	25.438	12 - 39			By-product of drinking water chlorination
State Regulated Contaminants							
Sodium (ppm)	n/a	n/a	13	13 - 13			Erosion of naturally occurring deposits; Used as water softener

Turbidity – Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Lead – Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home’s plumbing. If you are concerned about elevated lead levels in your home’s water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Sodium – There is not a state of federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 mg/l, and you are on a sodium-restricted diet, you should consult a physician.

1998 Non-Detected Contaminants

The following table includes contaminants monitored for, but not detected in the most recent sample. The CCR Rule does not require that this information be reported; however, monitoring has indicated that these contaminants were not present in the water supply. In some cases, if a contaminant is not detected in a water supply, monitoring can be reduced to once every three or six years.

Abbreviations: **nd** – not detected at testing limits. **n/a** – not applicable. **ppm** – parts per million or milligrams per liter. **ppb** – parts per billion or micrograms per liter. **ppt** – parts per trillion, or nanograms per liter. **ppq** – parts per quadrillion, or picograms per liter. **NTU** Nephelometric Turbidity Unit, used to measure cloudiness in drinking water. **%<0.5 NTU** – Percent samples less than 0.5 NTU. **MFL** – Million fibers per liter, used to measure asbestos concentration. **mrem/yr** – millirems per year, used to measure radiation absorbed by the body. **pCi/l** – picocuries per liter, used to measure radioactivity. **# pos/mo** – number of positive samples per month. **%pos/mo** – percent positive samples per month.

If a date appears in the “**Date of Sample**” column, the contaminant was monitored for prior to the CCR calendar year. If no date appears in the column, the contaminant was monitored for during the CCR calendar year.

Contaminant (units)	Level found	Range of detections	Date of Sample	Typical Sources of Contaminant
Microbial Contaminants				
Total coliform bacteria (# pos/mo)	nd	nd - nd		Naturally present in the environment
Total coliform and E. Coli (# pos/mo)	nd	nd - nd		Human and animal fecal waste
Radioactive Contaminants				
Beta/photon emitters (pCi/l)	nd	nd - nd	10/21/96	Decay of natural and man-made deposits
Alpha emitters (pCi/l)	nd	nd - nd	10/21/96	Erosion of natural deposits
Inorganic contaminants				
Antimony (ppb)	nd	nd - nd		Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	nd	nd - nd		Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos (MFL)	nd	nd - nd	11/28/95	Decay of asbestos cement water mains; Erosion of natural deposits
Beryllium (ppb)	nd	nd - nd		Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	nd	nd - nd		Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chromium (ppb)	nd	nd - nd		Discharge from steel and pulp mills; Erosion of natural deposits
Copper (ppm)	nd	nd - nd	9/10/96	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Cyanide (ppb)	nd	nd - nd		Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	nd	nd - nd		Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Mercury (inorganic) (ppb)	nd	nd - nd		Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from crop land

Contaminant (units)	Level found	Range of detections	Date of Sample	Typical Sources of Contaminant
Nitrite (as nitrogen) (ppm)	nd	nd - nd		Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	nd	nd - nd		Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Thallium (ppb)	nd	nd - nd		Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Synthetic Organic contaminants				
2,4-D (ppb)	nd	nd - nd		Runoff from herbicide used on row crops
2,4,5-TP [Silvex] (ppb)	nd	nd - nd		Residue of banned herbicide
Alachlor (ppb)	nd	nd - nd		Runoff from herbicide used on row crops
Atrazine (ppb)	nd	nd - nd		Runoff from herbicide used on row crops
Benzo(a)pyrene (ppt)	nd	nd - nd		Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	nd	nd - nd		Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	nd	nd - nd		Residue of banned termiticide
Dalapon (ppb)	nd	nd - nd		Runoff herbicide used on rights of way
Di(2-ethylhexyl)adipate (ppb)	nd	nd - nd		Discharge from chemical factories
Di(2-ethylhexyl)phthalate (ppb)	nd	nd - nd		Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	nd	nd - nd		Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples and orchards
Dinoseb (ppb)	nd	nd - nd		Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	nd	nd - nd		Runoff from herbicide use
Endothall (ppb)	nd	nd - nd		Runoff from herbicide use
Endrin (ppb)	nd	nd - nd		Residue of banned insecticide
Ethylene Dibromide (ppt)	nd	nd - nd		Discharge from petroleum refineries
Glyphosate (ppb)	nd	nd - nd	4/18/94	Runoff from herbicide use
Heptachlor (ppt)	nd	nd - nd		Residue of banned pesticide
Heptachlor Epoxide (ppt)	nd	nd - nd		Breakdown of heptachlor
Hexachlorobenzene (ppb)	nd	nd - nd		Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	nd	nd - nd		Discharge from chemical factories
Lindane (ppt)	nd	nd - nd		Runoff/leaching from insecticide used on cattle, lumber and gardens
Methoxychlor (ppb)	nd	nd - nd		Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, and livestock
Oxamyl [Vydate] (ppb)	nd	nd - nd		Runoff/leaching from insecticide used on apples, potatoes, and tomatoes
PCBs-Polychlorinated Biphenyls (ppt)	nd	nd - nd		Runoff from landfills; Discharge of waste chemicals
Pentachlorophenol (ppb)	nd	nd - nd		Discharge from wood preserving factories
Picloram (ppb)	nd	nd - nd		Herbicide runoff
Simazine (ppb)	nd	nd - nd		Herbicide runoff
Toxaphene (ppb)	nd	nd - nd		Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Contaminants				
Benzene (ppb)	nd	nd - nd		Discharge from factories; Leaching from gas storage tanks and landfills
Carbon Tetrachloride (ppb)	nd	nd - nd		Discharges from chemical plants and other industrial activities
Chlorobenzene (ppb)	nd	nd - nd		Discharges from chemical and agricultural chemical factories
O-dichlorobenzene (ppb)	nd	nd - nd		Discharge from industrial chemical factories
P-dichlorobenzene (ppb)	nd	nd - nd		Discharge from industrial chemical factories
1,2-dichloroethane (ppb)	nd	nd - nd		Discharge from industrial chemical factories
1,1-dichloroethylene (ppb)	nd	nd - nd		Discharge from industrial chemical factories
cis-1,2-dichloroethylene (ppb)	nd	nd - nd		Discharge from industrial chemical factories
Trans-1,2-dichloroethylene (ppb)	nd	nd - nd		Discharge from industrial chemical factories

Contaminant (units)	Level found	Range of detections	Date of Sample	Typical Sources of Contaminant
Dichloromethane (ppb)	nd	nd - nd		Discharge from pharmaceutical and chemical factories
1,2-dichloropropane (ppb)	nd	nd - nd		Discharge from industrial chemical factories
Ethylbenzene (ppb)	nd	nd - nd		Discharge from petroleum refineries
Styrene (ppb)	nd	nd - nd		Discharge from rubber and plastic factories; Leaching from landfills
Tetrachloroethylene (ppb)	nd	nd - nd		Leaching from PVC pipes; Discharge from factories and dry cleaners
1,2,4-trichlorobenzene (ppb)	nd	nd - nd		Discharge from textile-finishing factories
1,1,1-trichloroethane (ppb)	nd	nd - nd		Discharge from metal degreasing sites and other factories
1,1,2-trichloroethane (ppb)	nd	nd - nd		Discharge from industrial chemical factories
Trichloroethylene (ppb)	nd	nd - nd		Discharge from metal degreasing sites and other factories
Toluene (ppm)	nd	nd - nd		Discharge from petroleum factories
Vinyl chloride (ppb)	nd	nd - nd		Leaching from PVC piping; Discharge from plastics factories
Xylenes (ppm)	nd	nd - nd		Discharge from petroleum factories; Discharge from chemical factories
State Regulated Contaminants				
Aldrin (ppb)	nd	nd - nd		Runoff from use as an insecticide, not used since 1987
DDT (ppb)	nd	nd - nd		Runoff from use as a contact insecticide
Dieldrin (ppb)	nd	nd - nd		Runoff from use as an insecticide, not used since 1987
Iron (ppb)	nd	nd - nd		Erosion from naturally occurring deposits
Manganese (ppb)	nd	nd - nd		Erosion of naturally occurring deposits
Zinc (ppb)	nd	nd - nd		Naturally occurring; Discharge from metal factories

During the past year, the water produced from the Rock Island Arsenal water treatment plant met or exceeded all federal and state standards and no violations were recorded.

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).

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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791).