

DUCK RIVER UTILITY COMMISSION

2007 WATER QUALITY DATA

QUALITY ASSURANCE

In order to ensure that tap water is safe, the U.S. Environmental Protection Agency prescribes regulations that require utilities to monitor regularly for numerous substances in the water it produces. An independent laboratory certified by the EPA and the State of Tennessee performs this testing. All testing is conducted in compliance with current regulations. **The water produced by the DRUC has never exceeded the limits for any regulated compound or substance as established by the State of Tennessee or U. S. EPA.**

TEST RESULTS – NONE DETECTED

Analysis has been routinely performed for the following list of regulated substances and NONE were detected in the drinking water.

PRIMARY ORGANICS	VOLATILE ORGANICS	VOLATILE ORGANICS	INORGANICS	SYNTHETIC ORGANICS	SYNTHETIC ORGANICS
Alachlor	Bromobenzene	Dichloropropane	Arsenic	Carbofuran	Metolachlor
Aldicarb	Bromochloromethane	Dichloropropene	Antimony	Chlordane	Metribuzin
Benzene	Bromodichloromethane	Ethylbenzene	Beryllium	Dalapon	Oxamyl
CarbonTetrachloride	Bromomethane	Fluorotrichloromethane	Cadmium	Dicamba	PCB 1016
Dichloroethane	Butylbenzene	Hexachloro-1,3-butadiene	Chromium	Dieldrin	PCB 1221
Dichloroethylene	Chlorobenzene	Isopropylbenzene	Cyanide	Dinoseb	PCB 1232
Endrin	Chlorodibromomethane	p-Isopropyltoluene	Mercury	Di(2-ethylhexyl)adipate	PCB 1242
Lindane	Chloroethane	Naphthalene	Nickel	Di(2-ethylhexyl)phthalate	PCB 1248
Methoxychlor	Chloromethane	n-Propylbenzene	Selenium	2,3,7,8-TCDD (Dioxin)	PCB 1254
Paradichlorobenzene	o-Chlorotoluene	Styrene	Thallium	Endothall	PCB 1260
Toxaphene	p-Chlorotoluene	Tetrachloroethane	SYNTHETIC ORGANICS	Ethylene dibromide	Pentachlorophenol
Trichloroethane	Dibromomethane	Tetrachloroethylene	Aldicarb	Glyphosate	Picloram
Trichloroethylene	m-Dichlorobenzene	Toluene	Aldicarb Sulfone	Heptachlor	Propachlor
VinylChloride	o-Dichlorobenzene	Trichlorobenzene	Aldicarb Sulfoxide	Heptachlorepoxyde	Simazine
2,4-D	Dichlorodifluoromethane	Trichloroethane	Aldrin	Hexachlorobenzene	RADIONUCLIDES
2,4,5-TP (Silvex)	Dichloroethane	Trichloropropane	Butachlor	Hexachlorocyclopentadiene	Gross Alpha
ASBESTOS	Dichloroethylene	Trimethylbenzene	Benzo(a)pyrene	3-Hydroxycarbofuran	Radium 226
Asbestos Fibers	Dichloromethane	Xylene	Carbaryl	Methomyl	Radium 228

TEST RESULTS – REQUIRED REPORTING OR DETECTED COMPOUNDS

The following water quality analysis and testing information is required reporting or are substances that were detected in the drinking water. All of the substances that were detected are present at levels well below the U. S. EPA limits and do not pose a health risk to the general public.

Substance (units)	EPA Limit (MCL)	DRUC Maximum	DRUC Range	EPA Goal (MCLG)	Possible Source of the Contaminant
Microbial Contaminants					
Total Coliform (# Positive)	< 2	0	0	0	Very small organisms such as bacteria
Fecal Coliform & E. Coli (# Positive)	0	0	0	0	Naturally present in the environment
Total Organic Carbon (ppm)*	TT*	2.0	1.6 – 2.0	N/A	Human and animal fecal waste
Turbidity (NTU)*	TT*	0.11	0.03 - 0.11	N/A	Naturally present in the environment
Inorganic Compounds					
Barium (ppm)	2	0.024	0.024	2	Turbidity does not present any risk to your health and is measured to assess the effectiveness of the filtration system.
Chlorine (ppm)	MRDL = 4	1.95	1.13 - 1.95	MRDLG = 4	Substances of mineral origin
Chlorine Dioxide (ppb)	800	450	0 – 450	800	Natural Erosion, drilling wastes, metal refinery waste
Chlorite (ppm)	1	0.78	0.00 - 0.78	0.80	Water additive used to control microbes
Fluoride (ppm)	4	0.82	0.00 - 0.82	4	Water additive used to control microbes
Nitrate (ppm)	10	0.33	0.33	10	Byproduct of drinking water chlorination
Sodium (ppm)	N/A	3.5	3.5	N/A	Added to prevent tooth decay, natural erosion
Copper (ppm)	AL = 1.3	0.28	0.01 - 0.70	1.3	Agricultural runoff, natural erosion, sewage discharge
Lead (ppb)	AL = 15	3	0.0 - 30	0	Natural erosion, component of water additives
Organic Compounds					
Atrazine	3	0.10	0.00 – 0.10	3	Natural or synthetic carbon based compounds
Haloacetic Acids Total (ppb)	60	35	17 – 53	0	Runoff from herbicide used on row crops
Trihalomethanes Total (ppb)	80	49	21 – 66	0	Byproduct of drinking water disinfection

DEFINITIONS: **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. **MCLG:** Maximum Contaminant Level Goal, or 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, or the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants. **MRDLG:** Maximum Residual Disinfectant Level Goal, or 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 the disinfectants to control microbial contaminants. **AL:** Action Level, or the concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow. **TT:** Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water. **BDL:** Below the Detection Limit. **ppb:** Parts per billion or micrograms per liter (explained in terms of money as one penny in \$10,000,000.00. **ppm:** parts per million or milligrams per liter (explained in terms of money as one penny in \$10,000.00. **pCi/L:** picocuries per liter. **NTU:** Nephelometric Turbidity Unit; Turbidity is a measure of the clarity of the water. Turbidity in excess of 5 NTU becomes just noticeable to the average person. * The Treatment Technique requirements for both Turbidity and Total Organic Carbon were met throughout the year.

TEST RESULTS – SOURCE WATER MONITORING

The DRUC water source, Normandy Reservoir, is very clean and the DRUC encounters no difficulty in treating the water to EPA and State of Tennessee standards. The DRUC routinely monitors the reservoir water for various contaminants and any indication of potential pollution. Prevention of pollution of our water source is one of our highest priorities. Below is a summary of recent source water testing in cooperation with other agencies including the USEPA, State of Tennessee and Tennessee Valley Authority. **NONE of these contaminants have ever been found in the treated water distributed to customers.** These tests are strictly results on raw untreated water from Normandy Reservoir.

CRYPTOSPORIDIUM OOCYSTS: From 2003 to 2005, the DRUC completed 24 months of testing on reservoir water for this common organism that can be found in nature, mostly as a result of the presence of wildlife and livestock animals. During only 5 of the 24 monthly sampling events were oocysts detected. Those five samples ranged from 1 to 17 oocysts per liter of water. The test results are very low indicating little contamination of the reservoir from livestock or wildlife. NOTE: Federal regulations now require all surface water systems serving more than 10,000 people to sample for Cryptosporidium. The DRUC had already completed this required testing. Cryptosporidium is a microbial parasite which is found in surface waters throughout the United States. **No cryptosporidium oocysts were detected in our finished water samples.** Cryptosporidium is effectively removed by filtration and the DRUC system currently provides treatment which is designed to remove cryptosporidium. The USEPA has determined that the presence of cryptosporidium at the concentration level reported in our source water is insignificant, based on the level of treatment we currently provide. Symptoms of cryptosporidium infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immune-compromised people have more difficulty and are at greater risk of developing severe, life threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. For more information on Cryptosporidium, contact the Safe Drinking Water Hotline (800-426-4791).