Drinking Water Quality and Compliance
Annual Notice to Consumers

Introduction

The Water Security Agency and the Ministry of Environment requires that at least once each year waterworks owners provide notification to consumers of the quality of water produced and supplied as well as information on the performance of the waterworks in submitting samples as required by a Minister's Order or Permit to Operate a waterworks. The following is a summary of the Town of Cut Knife water quality and sample submission compliance record for the January 01, 2020 to December 31, time period. This report was completed on January12, 2021. Readers should refer to Water Security Agency's Municipal Drinking Water Quality Monitoring Guidelines, June 2015, EPB 502 for more information on minimum sample submission requirements and the meaning of type of sample. Permit requirements for a specific waterworks may require more sampling than outlined in the department's monitoring guidelines. If consumers need more information on the nature and significance of specific water tests, for example, "what is the significance of Selenium in a water supply", more detailed information is available from: http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index_e.html .

Water Quality Standards
Bacteriological Quality

Parameter/Location	Limit	Regular Samples Required	Regular Samples Submitted	# of Positive Regular Submitted (%)
Total Coliform	0 Organisms/100 mL	52	52	0%
E. coli	0 Organisms/100 mL	52	52	0%
Background Bacteria	Less than 200/100 mL	52		0%

Water Disinfection –
Chlorine Residual in Distribution System for Test Results Submitted with Bacteriological Samples

Parameter	Minimum Limit	Total Chlorine Residual Range	Free Chlorine Residual Range	# Tests Required	# Tests Submitted	# Adequate Chlorine (%)
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	0.58-1.40	0.70-1.17	52	52	100%

Water Disinfection - Free Chlorine Residual for Water Entering Distribution System from Waterworks Records- From Water Treatment Plant Records

Parameter	Limit (mg/L)	Test Level Range	# Tests Performed	# Tests Not Meeting Requirements
Free Chlorine Residual	at least 0.1	0.62-1.37	365	0

A minimum of 0.1 milligrams per litre (mg/L) free chlorine residual is required for water entering the distribution system. Tests are normally performed on a daily basis by the waterworks operator and are to be recorded in operation records. This data includes the number of free chlorine residual tests performed, the overall range of free chlorine residual (highest and lowest recorded values) and the number of tests and percentage of results not meeting the minimum requirement of 0.1 mg/L free chlorine residual.

Turbidity – From Water Treatment Plant Records

Parameter	Limit (NTU)	Test Level Range	# Tests Not Meeting Requirements	Maximum Turbidity (NTU)	# Tests Required	# Tests Performed
Turbidity	1.0	0.03-0.15	0	0.15	365	365

Chemical – Health Category

All waterworks serving less than 5000 persons are required to submit water samples for SE's Chemical Health category once every 2 years. The Chemical Health category includes analysis for arsenic, barium, boron, cadmium, chromium, fluoride, lead, nitrate, selenium and uranium.

Saskatchewan Ministry of Environment

Water Security Agency

The last sample for Chemical Health analysis was submitted on August 27,2020. Sample results indicated that the provincial drinking water quality standards were not exceeded.

All waterworks serving less than 5000 persons are required to submit water samples for SE's General Chemical category once every two years if a ground water source and once per three months every second year if a surface water or blended surface/groundwater source. The General Chemical category includes analysis for alkalinity, bicarbonate, calcium, carbonate, chloride, conductivity, hardness (as $CaCO_3$), magnesium, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was required in 2020 and submitted on *August 27, 2020.*

*Objectives apply to certain characteristics of or substances found in water for human consumptive or hygienic use. The presence of these substances will affect the acceptance of water by consumers and/or interfere with the practice of supplying good quality water. Compliance with drinking water aesthetic objectives is not mandatory as these objectives are in the range where they do not constitute a health hazards. The aesthetic objectives for several parameters (including hardness as $CaCO_3$, magnesium, sodium and total dissolved solids) consider regional differences in drinking water sources and quality.

More information on water quality and sample submission performance may be obtained from:

Town of Cut Knife
PO Box 130
Cut Knife SK
S0M 0N0
306-398-2363
townofcutknife@sasktel.net

June 2015 *EPB 536D*

Saskatchewan Ministry of Environment

Water Security Agency

SASKATCHEWAN RESEARCH COUNCIL

Environmental Analytical Laboratories
143-111 Research Drive, Saskatoon, SK Canada S7N 3R2

T: 306-933-6932 F: 306-933-7922
Toll-free: 1-800-240-8808
E: analytical@src.sk.ca

www.src.sk.ca/analytical

SRC Group # 2020-9718

Aug 27, 2020

Town of Cut Knife
Box 130
102 Broad Street
Cut Knife, SK S0M 0N0
Attn: Chris Boyd

Date Samples Received: Aug-20-2020 Client P.O.:

All results have been reviewed and approved by a Qualified Person in accordance with the Saskatchewan Environmental Code, Corrective Action Plan Chapter, for the purposes of certifying a laboratory analysis

Results from Lab Section 1, Lab Section 2 authorized by Keith Gipman, Supervisor

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* Test methods and data are validated by the laboratory's Quality Assurance Program.

* Routine methods follow recognized procedures from sources such as
    * Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF
    * Environment Canada
    * US EPA
    * CANMET

* The results reported relate only to the test samples as provided by the client.

* Samples will be kept for 30 days after the final report is sent. Please contact the lab if you have any special requirements.

* Additional information is available upon request.

* Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

This is a final report.

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Aug 27, 2020

Town of Cut Knife
Box 130
102 Broad Street
Cut Knife, SK S0M 0N0
Attn: Chris Boyd

Date Samples Received: Aug-20-2020 Client P.O.:

40286 08/18/2020 09:22 WATER TREATMENT PLANT TREATED WATER RESERVOIR *WATER*

Analyte	Units	40286
Lab Section 1		
Bicarbonate	mg/L	62
Carbonate	mg/L	<1
Chlorate	mg/L	0.11
Chloride	mg/L	2.8
Chlorite	mg/L	<0.05
Hydroxide	mg/L	<1
P. alkalinity	mg/L	<1
pH	pH units	7.84
Specific conductivity	uS/cm	96
Sum of ions	mg/L	91
Total alkalinity	mg/L	51
Total hardness	mg/L	<1
Ammonia as nitrogen	mg/L	<0.01
Nitrate	mg/L	<0.04
Bromate	mg/L	<0.005
Fluoride	mg/L	0.01
Total dissolved solids	mg/L	62
Lab Section 2		
Calcium	mg/L	0.3
Magnesium	mg/L	<0.1
Potassium	mg/L	0.1
Sodium	mg/L	24
Sulfate	mg/L	1.5
Aluminum	mg/L	0.0028
Antimony	mg/L	<0.0002
Arsenic	ug/L	7.4
Barium	mg/L	<0.0005
Boron	mg/L	0.34
Cadmium	mg/L	<0.00001
Chromium	mg/L	<0.0005

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Town of Cut Knife

40286 08/18/2020 09:22 WATER TREATMENT PLANT TREATED WATER RESERVOIR *WATER*

Analyte	Units	40286
Lab Section 2		
Copper	mg/L	0.0076
Iron	mg/L	0.0022
Lead	mg/L	0.0002
Manganese	mg/L	<0.0005
Selenium	mg/L	<0.0001
Silver	mg/L	<0.00005
Uranium	ug/L	<0.1
Zinc	mg/L	0.0072

Symbol of "<" means "less than". This indicates that it was not detected at level stated above.

The temperature of the cooler was 22.1 °C upon receipt.

The information in this report will be shared with the Water Security Agency.

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Aug 27, 2020

Town of Cut Knife

Analyte Methods

Name	Units	Method
P. alkalinity	mg/L	Chm-211
Bromate	mg/L	Chm-133 / Chm-134
Chlorate	mg/L	Chm-133 / Chm-134
Chloride	mg/L	Chm-133 / Chm-134
Chlorite	mg/L	Chm-133 / Chm-134
Carbonate	mg/L	Chm-211
Fluoride	mg/L	Chm-211
Bicarbonate	mg/L	Chm-211
Ammonia as nitrogen	mg/L	Chm-123
Nitrate	mg/L	Chm-124
Hydroxide	mg/L	Chm-211
pH	pH units	Chm-211
Total dissolved solids	mg/L	Chm-203
Specific conductivity	uS/cm	Chm-211
Sum of ions	mg/L	Calculation
Total hardness	mg/L	Calculation
Total alkalinity	mg/L	Chm-211
Silver	mg/L	Chm-522
Aluminum	mg/L	Chm-522
Arsenic	ug/L	Chm-522
Boron	mg/L	Chm-522
Barium	mg/L	Chm-522
Calcium	mg/L	Chm-508
Cadmium	mg/L	Chm-522
Chromium	mg/L	Chm-522
Copper	mg/L	Chm-522
Iron	mg/L	Chm-522
Potassium	mg/L	Chm-508
Magnesium	mg/L	Chm-508
Manganese	mg/L	Chm-522
Sodium	mg/L	Chm-508
Lead	mg/L	Chm-522
Antimony	mg/L	Chm-522
Selenium	mg/L	Chm-522
Sulfate	mg/L	Chm-508
Uranium	ug/L	Chm-522
Zinc	mg/L	Chm-522