

# City of Red Deer

## Water Quality – February 2020

### Subcontracted Testing for Treated Discharge

Report ID 20R571032

#### Water Quality Parameters – February 4, 2020 (\* from WTP in-house benchtop testing)

Parameter	Units	Value	GCDWQ MAC
pH*	mg/L	7.91	A/O 6.5-8.5
Turbidity*	NTU	0.06	A/O < 1.0
Total Alkalinity*	mg/L	205.4	NR
Total Hardness (mg CaCO <sub>3</sub> /L)	mg/L	267	NR
Total Dissolved Solids	mg/L	260	A/O < 500
Total Chlorine*	mg/L	2.17	4 (US EPA)
Sulfate	mg/L	49	A/O < 500
Chloride	mg/L	9	A/O ≤ 250

Parameter	Units	Value	GCDWQ MAC
Fluoride	mg/L	0.12	≤ 1.50
Total Calcium	mg/L	72.9	NR
Total Magnesium	mg/L	20.7	NR
Total Sodium	mg/L	10.4	A/O ≤ 200
Total Potassium	mg/L	1.2	NR
Total Iron	mg/L	<0.1	A/O ≤ 0.3
Nitrite	mg/L	<0.05	≤ 1.0
Nitrate	mg/L	0.5	≤ 10.0

#### Other Parameters – February 4, 2020

Parameter	Units	Value	GCDWQ MAC
Total Ammonia (as N)	mg/L	<0.20	NR
Sulfide	mg/L	<0.02	A/O ≤ 0.05
Total Trihalomethanes	mg/L	0.014	0.1
Total Aluminum	mg/L	0.094	OG < 0.1
Total Arsenic	mg/L	<0.001	0.010 (ALARA)
Total Barium	mg/L	0.11	1
Total Boron	mg/L	<0.01	5
Total Cadmium	mg/L	<0.00005	0.005
Total Chromium	mg/L	<0.0005	0.05

Parameter	Units	Value	GCDWQ MAC
Total Copper	mg/L	<0.0008	A/O ≤ 1.50
Total Cyanide	mg/L	<0.002	0.2
Total Lead	mg/L	<0.0001	0.005 (ALARA)
Total Manganese	mg/L	<0.005	0.12 AO ≤ 0.02
Total Mercury	mg/L	<0.000025	0.001
Total Phosphorus	mg/L	<0.08	NR
Total Selenium	mg/L	<0.0005	0.05
Total Uranium	mg/L	<0.001	0.02
Total Zinc	mg/L	<0.01	A/O ≤ 1.50

GCDWQ – Guidelines for Canadian Drinking Water Quality

MAC – Maximum Acceptable Concentration

AO – Aesthetic Objective

OG – Operational Guidance

ALARA – As Low As Reasonably Achievable

NR – No Requirement as per GCDWQ