

City of Red Deer

Water Quality –December 2020

Subcontracted Testing for Treated Discharge

Report ID 20R685471

Water Quality Parameters–December 1, 2020 (* from WTP in-house benchtop testing)

Parameter	Units	Value	GCDWQ MAC	Parameter	Units	Value	GCDWQ MAC
pH*	mg/L	7.98	A/O 6.5-8.5	Fluoride	mg/L	0.56	≤ 1.50
Turbidity*	NTU	0.05	A/O < 1.0	Total Calcium	mg/L	63.7	NR
Total Alkalinity*	mg/L	194.1	NR	Total Magnesium	mg/L	19.2	NR
Total Hardness (mg CaCO ₃ /L)	mg/L	238	NR	Total Sodium	mg/L	12.4	A/O ≤ 200
Total Dissolved Solids	mg/L	225	A/O < 500	Total Potassium	mg/L	1.3	NR
Total Chlorine*	mg/L	2.19	4 (US EPA)	Total Iron	mg/L	<0.1	A/O ≤ 0.3
Sulfate	mg/L	41.4	A/O < 500	Nitrite	mg/L	<0.05	≤ 1.0
Chloride	mg/L	4.6	A/O ≤ 250	Nitrate	mg/L	<0.5	≤ 10.0

Other Parameters–December 1, 2020

Parameter	Units	Value	GCDWQ MAC	Parameter	Units	Value	GCDWQ MAC
Total Ammonia (as N)	mg/L	0.28	NR	Total Copper	mg/L	0.0010	A/O ≤ 1.50
Sulfide	mg/L	<0.02	A/O ≤ 0.05	Total Cyanide	mg/L	<0.002	0.2
Total Trihalomethanes	mg/L	0.019	0.1	Total Lead	mg/L	<0.0001	0.005 (ALARA)
Total Aluminum	mg/L	0.072	OG < 0.1	Total Manganese	mg/L	<0.005	0.12 AO ≤ 0.02
Total Arsenic	mg/L	<0.001	0.010 (ALARA)	Total Mercury	mg/L	<0.000025	0.001
Total Barium	mg/L	0.08	1	Total Phosphorus	mg/L	<0.08	NR
Total Boron	mg/L	0.01	5	Total Selenium	mg/L	<0.0005	0.05
Total Cadmium	mg/L	<0.000016	0.005	Total Uranium	mg/L	<0.001	0.02
Total Chromium	mg/L	<0.0005	0.05	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