

City of Red Deer

Water Quality – August 2024

Subcontracted Testing for Treated Discharge

Report ID 24R181193

Water Quality Parameters–August 1, 2024 (* from WTP in-house benchtop testing)

Parameter	Units	Value	GCDWQ MAC	Parameter	Units	Value	GCDWQ MAC
pH*	mg/L	8.15	A/O 6.5-8.5	Fluoride	mg/L	0.60	≤ 1.50
Turbidity*	NTU	0.056	A/O < 1.0	Total Calcium	mg/L	47.3	NR
Total Alkalinity*	mg/L	121.8	NR	Total Magnesium	mg/L	16.2	NR
Total Hardness (mg CaCO ₃ /L)	mg/L	185	NR	Total Sodium	mg/L	14.7	A/O ≤ 200
Total Dissolved Solids	mg/L	277	A/O < 500	Total Potassium	mg/L	1.05	NR
Total Chlorine*	mg/L	2.16	4 (US EPA)	Total Iron	mg/L	<0.01	A/O ≤ 0.3
Sulfate	mg/L	65.7	A/O < 500	Nitrite	mg/L	<0.05	≤ 3
Chloride	mg/L	3.6	A/O ≤ 250	Nitrate	mg/L	<0.5	≤ 45

Other Parameters–August 1, 2024

Parameter	Units	Value	GCDWQ MAC	Parameter	Units	Value	GCDWQ MAC
Total Ammonia (as N)	mg/L	0.36	NR	Total Copper	mg/L	<0.0008	2.0 A/O ≤ 1.0
Sulfide	mg/L	<0.02	A/O ≤ 0.05	Total Cyanide	mg/L	<0.002	0.2
Total Trihalomethanes	mg/L	0.024	0.1	Total Lead	mg/L	<0.0001	0.005 (ALARA)
Total Aluminum	mg/L	0.073	2.9 OG < 0.1	Total Manganese	mg/L	0.0003	0.12 AO ≤ 0.02
Total Arsenic	mg/L	<0.001	0.010 (ALARA)	Total Mercury	mg/L	0.00002	0.001
Total Barium	mg/L	0.08	2.0	Total Phosphorus	mg/L	<0.05	NR
Total Boron	mg/L	0.01	5	Total Selenium	mg/L	<0.0005	0.05
Total Cadmium	mg/L	<0.000016	0.007	Total Uranium	mg/L	<0.001	0.02
Total Chromium	mg/L	<0.0005	0.05	Total Zinc	mg/L	<0.004	A/O ≤ 5.0

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