Table 3.3-1. Water Quality Classification System for Zortman Mine and Landusky Mine Water Samples

Water Sample Classification Rules							
TYPE	**1**	**2M**	**2NM**	**2L**	**3**	**4**	**5**
Specific Conductance (uS)	< 250	250 - 1000	< 1000	500 - 1500	≥ 1000	≥ 1000	
pH (s.u.)	6 - 8	≥ 6.8	≥ 6.8	≥ 7	≤ 6	≥ 6.8	
Nitrate (mg/l)	≤ 0.1	< 1.0	< 1.0	< 1.0	> 1.0	> 1.0	>1.0
Copper (mg/l)	< 0.05	< 0.05	< 0.05	< 0.05	≥ 0.1	< 0.05	> 0.05
Sulfate (mg/l)	2 - 20	75 - 400	75 - 400	$SO_4 < HCO_3$	> 400	> 400	
Alkalinity (mg/l)	5 - 30	30 - 150	30 - 150	> 150	< 20	> 20	
Arsenic (mg/l)	≤ 0.01	> 0.10	< 0.10	< 0.10	< 0.10	< 0.10	> 0.10
Iron (mg/l)	≤ 0.5	≥ 0.3	0.01 - 1.0	< 0.1			
Cyanide (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01			> 0.01

NOTES:1 - Headwaters Background, Groundwater (GW) & Surface Water (SW)
2M - Mineralized Syenite Background, GW & SW
2 NM - Non-Mineralized Syenite Background, GW & SW
2L - Limestone Background, GW
3 - Mine/ARD Impacted, GW & SW
4 - Neutralized ARD-Mixed, GW & SW
5 - Various mine-related indicators at low levels or occasionally (nitrate, metals, cyanide), non-Type 4 Classification based on Swift Gulch Data, 1996-2000, adjusted for the observed ranges at other sites with pH and SC fixed. Any single parameter exceeding the type 5 criteria triggers the application of Type 5.