Table 4.2-1 Example of Waste Stream Composition for Deep Well Disposal *

Parameter	RO Brine	Resin Rinse	Elution Bleed	Yellowcake Wash Water	Restoration Wastes
Flow Rate [1] (gpm)	60	< 3	3	7	130
Inorganic Parameters (ppm)					
Ammonia	-- [2]	--	<1 [3]	--	--
Arsenic	--	--	--	--	0.1 to 0.3
Bicarbonate	--	600 to 900	--	--	400 to 700
Calcium	3,000 to 5,000	--	--	--	--
Carbonate	--	500 to 800	--	--	300 to 600
Chloride	15,000 to 20,000	10,000 to 15,000	12,000 to 15,000	4,000 to 6,000	--
Magnesium	1,000 to 2,000	--	--	--	--
Sodium	10,000 to 15,000	6,000 to 11,000	6,000 to 8,000	3,000 to 4,000	380 to 720
Selenium	--	--	--	--	0.05 to 0.15
Sulfate	< 1	--	--	--	100 to 200
Radiological Parameters (pCi/L)					
Gross Alpha	--	--	--	--	2,000 to 3,000
Gross Beta	--	--	--	--	2,500 to 3,500
Radium-226	< 5	100 to 200	100 to 300	20 to 50	50 to 100
Thorium-230 [4]	--	50 to 100	10 to 30	10 to 20	50 to 150
U (ppm)	--	1 to 3	5 to 10	3 to 5	< 1

* Adapted from Table 2.7-3 on Page 2-36 of NRC's Generic Environmental Impact Statement (GEIS) for In Situ Uranium Mining (NRC, 2009). LC ISR, LLC will sample the waste stream components frequently, throughout the life of the mine, to ensure the disposal operations are conducted in accordance with the design and safety parameters of the deep wells.

[1] See Figures 3.2-5 and 6.2-1 of this report for additional information on the water balance.

[2] Not expected to be present.

[3] Table 2.7-3 of the GEIS shows ammonia concentrations of 180 to 640 ppm. However, LC ISR, LLC does not propose to use ammonia during the precipitation process, so the concentration of ammonia is expected to be minimal.

[4] Based on the Lost Creek ore characteristics, the Thorium-230 concentrations are expected to be less than those shown in the GEIS (NRC, 2009).