

EXHIBIT / FOOT NOTE

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Table 3 Summary of Infiltration Results

Simulation / Sensitivity	Cumulative 1D Seepage (m)	Average Seepage rate (in/yr)	Average Seepage rate (% MAP)	Facility Seepage rate (gpm)
Base Case	0.02	0.001	0.01%	0.02
Alternate Clay Tailings	1.0	0.056	0.46%	1.12
No Transpiration	2.2	0.121	0.99%	2.42
Reduced Evaporation	0.14	0.008	0.06%	0.15
12-inch Cover	0.68	0.038	0.31%	0.76

Draindown model results

Seepage related to the drainage of insitu water content during the first 1,000 years of emplacement was zero. Water content at the bottom of the CTFS was simulated to slowly increase as a result of unsaturated gravity drainage (Figure 6). However, pore water along the bottom of the CTFS will remain in tension with clay material until water content reaches field saturation conditions to overcome capillary tension and freely seep into the collection system. The wetting front via infiltration slowly migrated downward to approximately the 20 m depth during the 1,000 year simulation, confirming that there will be significant time before any infiltration reaches the CTFS bottom. In practice a minor amount of draindown may occur, due to macro pores, heterogeneity, and stacking irregularities; but it is anticipated to be very small, if measurable at all.

CONCLUSIONS

Key conclusions drawn from the foregoing analysis are summarized as follows:

- The hydraulic conductivity of the clay tailings material in the CTFS is anticipated to be very low, in the range of 10^{-6} to 10^{-7} cm/s based on testing data as well as the anticipated grain size of clay tailings and compaction during stacking. Thus, the clay tailings themselves function as a 190 ft thick clay cap.
- A store and release cover is proposed to close the CTFS which is designed to shed runoff, reduce erosion, and foster vegetation growth. The store and release cover is expected to be very efficient at removing precipitation percolation, owing the thicker profile of materials (24-inch) and being underlain by low permeability clay tailings. The penetration of moisture through the upper clay tailings is limited by the material's low hydraulic conductivity. When the growing season resumes, soil capillarity and root uptake remove the excess water stored in the cover.
- Water content in the store and release cover will fluctuate seasonally, which will wet the upper layer of clay tailings and reduce desiccation. Given the thickness of the clay tailings,