Tailings management is an inherently reactive proposition as operations personnel must manage everything that is delivered from the concentrator. However, experience shows us that tailings operators can serve a more vital function in the construction of a tailings storage facility. Operators often represent an undervalued commodity and untapped resource that can provide benefits beyond just traditional day-to-day operational support. An operator’s experiential knowledge base and creativity are often left untapped. However, with proper training and guidance these valuable resources can be harnessed contributing to safe dam operations. Operator engagement, when properly facilitated, provides tangible benefits ranging from improved tailings index properties to reduced management and closure costs. Five levels of operator engagement are identified in the tailings management process and the incremental benefits of each level of engagement are presented. The overall goal of leveraging operator participation is to facilitate committed ownership and transition tailing management from an inefficient reactive process to an improved, cost-saving, proactive practice.