A reproducing kernel Banach space is just like a reproducing kernel Hilbert space, except that the reproducing kernel is an element of the dual space. The example that interests us is the space $BV(0,1)$, the relevant norms being $\| f \|_{BV,h} = \| f \|_{L^2} + h \| f \|_{TV}$, for $h > 0$. (These norms are equivalent, but not uniformly in $h$.) The rkbs set-up is used to show convergence rates for the total-variation-regularization of compact operator equations in $BV(0,1)$, with noisy data (zero mean, uncorrelated with finite (fixed) variance), even though the regularized solution need not be unique. The rkbs theory provides a simple alternative to the metric entropy approach. This represents joint work with Vince LaRiccia. (Received October 04, 2004)