We study the geodesic exponential maps corresponding to Sobolev type right-invariant (weak) Riemannian metrics $g(k)$ ($k = 0, 1, \ldots$) on the Virasoro group $\text{Vir}$ and show that for $k = 2, 3, 4, \ldots$, but not for $k = 0, 1$, each of them defines a smooth Frechet chart of the unital element in $\text{Vir}$. The geodesic exponential map for $k = 0$ corresponds to the KdV equation and hence is not a local diffeomorphism near the origin. (Received September 23, 2004)