This work is devoted to the study of the ASARCO demolition seismic data. In April 2013 two old smoke stacks leftover by the ASARCO Company were demolished in the City of El Paso. The University of Texas at El Paso deployed a series of vertical-component seismometers in downtown El Paso between 0.5 and 5.5 km from the stacks with the objective to record the seismic waves generated by the demolition. In the present study we use some of the seismograms recorded during the demolition. A seismogram is a time series that records the displacement of the ground caused by passing seismic waves. We applied Levy models, DFA and Hurst methods to study the presence of memory effects in these time series. We conclude that the three models may be used to estimate characteristic parameters of the propagation medium for seismic waves, and that the data presents long range correlations and memory effects. (Received January 28, 2015)