An operational plan for safe and effective CO2 injection at Wellington Field, Kansas (DE-FE0006821) in perspective of recent, nearby seismic activity

Recent earthquakes in south-central Kansas dramatically increased since 2013 to 108 events above 2 magnitude in 2014 compared to, on average, less than 2 events per year state-wide prior to 2014. Coincident with the increase in seismicity that began in 2013, a notable increase in high capacity (volume, rate, and injection pressure) Class II brine disposal wells began injection into the Lower Ordovician Arbuckle Group saline aquifer, the same unit to be tested at Wellington Field.

Today's plan involves 2) a supporting number of objectives focused on improved injection management. These goals include a) improving the understanding of the geologic setting and its history of deformation, b) creating a reliable hazard and risk assessment framework, c) developing a risk management framework to control seismic risk, and d) identifying and implementing mitigation strategies. The Wellington Seismic Action Plan is designed to address these objectives. The plan is supported by the latest technology for monitoring and modeling to enhance the effectiveness of the injection program.