We present a high-resolution video registration pipeline for non-invasive evaluation of irradiated concrete samples used in nuclear power plant containment structures. A remote-operable scanning device was developed to safely capture 360° video scans of cylindrical concrete caps under varied illumination, enabling visual inspection in radioactive environments. The main objective is to evaluate and compare the performance of three registration algorithms, µDIC, ORB, and LightGlue, to align image frames into coherent 3D representations. Using quantitative metrics and visual assessment, the study examines registration precision, algorithm robustness, and system limitations. Informative composite images support future automated crack detection. The results offer insight into resolution limits, guide improvements to the scanner, and suggest directions for research on long-term monitoring of concrete degradation.