Lost Link Procedures

Before takeoff, the UA is preprogrammed with a flight plan. This flight plan can be modified during flight if the UA is within communication range of the ground control station (GCS). However, the flight plan is built and simulated such that the UA can successfully fly the flight plan without any interaction from the GCS operator. Therefore the communication link between the UA and the GCS operator is not necessary for a successful flight. Nonetheless, for more safety, the UA is programmed to fly back to the STDBY waypoint and circle above at 400' AGL if communication is lost for more than 30 seconds. The STDBY waypoint is located near the pilot (29°48'7.81"N, 97°53'28.38"W). If communication is reestablished while flying towards the STDBY waypoint, the GCS operator can change the flight plan to stay within communication range and resume the flight. The GCS operator could also land the UA using the landing area indicated by the flight operations. If communication is not reestablished, the pilot will take manual control and land the UA in the landing area when it comes into visual line-of-sight. If the pilot is not able to take manual control of the UA and communication has not been reestablished with the GCS, the UA will continue circling around STDBY for 2 minutes or until the battery voltage falls below 10v. At this point, the motor will shut off, the autopilot will stop holding altitude, and the UA will safely descend to the ground in the same pattern around STDBY.