

NASA SIO – San Joaquin Valley Concept of Operations

American Aerospace, under Federal Award 80AFRC18M0003, is working with NASA to advance the technology of UAS for use in the NAS. Under the contract, American Aerospace is required to perform a flight operation with a commercial purpose while carrying DAA equipment and advanced C2 radios. The aircraft will carry Echodyne EchoFlight radars and a Collins Aerospace CNPC-5000E radio. The ground station will use a CNPC-5000E radio integrated with a tripod-mounted tracking antenna with 360deg continuous rotation. The tracking antenna is equipped with a vertically polarized 31dBi parabolic dish with 5.8deg elevation / 3.6deg azimuth HPBW.

Initial UAS demonstration flights are planned for Q1 2021 in the San Joaquin Valley. Operations will take place out of Buttonwillow Airport, 25 miles west of Bakersfield, CA. Flight operations will take place within the airspace defined by COA 2020-WSA-6333 (green lines) over pipelines (pink lines) within 50 miles (red arc) of Buttonwillow Airport. The maximum altitude is 5000' MSL although most flights over the pipelines will take place at approximately 2000' AGL.

