The Curators of the University of Missouri is the governing body of the University of Missouri public university system created in 1839 under the Geyer Act.

The Curators hold a Certificate of Authority issued by the FAA permitting unmanned aircraft (drone) operation in accordance with the requirements of the Certificate of Authority. The Curators operate the rural Wurdack Research Center for research on integrated livestock, forages, forestry and wildlife management to develop practices that are economically viable, environmentally sound, and sociologically acceptable for the Missouri Ozarks. The Curators are constructing a drone to deploy highly sensitive sensors and monitoring equipment to assist in monitoring the research underway. The drone will be customized to meet the particularized demands of this monitoring activity. Specifically, the drone is designed to provide a very stable long range platform, flexible mounting options and large payload capacity, along with added redundancies to assure safe flight and protection of the sophisticated equipment on board.

The video transmitter that is the subject of this application will be used to relay first person video data back to ground station (monitors aircraft in flight) and the pilot (controls aircraft) simultaneously. This information is necessary for the pilot to quickly and accurately align himself to the orientation of the aircraft at a distance, so that safe and accurate control of the aircraft is maintained. Existing technologies that are presently available for this application in non-regulated bands do not have the propagation characteristics that will maintain signal integrity at the required distance. Operation in the 1.3 Ghz band will allow for more range without creating harmful interference with the sensors and monitoring equipment being used.

The principal location where the applicant will use the drone is at the Wurdack Research Center, a 1200-acre facility in rural Cook Station, Missouri.

A “no” response was entered on Form 442 in response to the questions regarding whether the proposed antenna will extend more than 6 meters above ground or any structure/building on which it is mounted because the drone-mounted nature of this antenna is not contemplated by the form. To clarify that response: The video transmitter will be mounted inside the fuselage of a remote controlled airplane which will generally operate at more than 6 meters above ground. The Certificate of Authority limits operation of the drone to 400 feet AGL in Class G airspace, outside specified distances to public use airports, heliports, gliderports or water landing ports, and requires notification to local air facilities prior to operations.