



SAFETY ALERT

AMEREN TRANSMISSION **FIXED-WING DRONE** EVENT

A Transmission drone crew was training new users on the operation of a fixed-wing drone known as the eBee. The eBee is approximately four feet long, weighs seven to ten pounds, and is constructed of mainly Styrofoam with an exposed rear-propeller made of plastic.

The crew performed a standard preflight check after building a flight plan for the automated mission. No abnormal items were identified. With the use of an anemometer, wind speeds were recorded and noted to be within the manufacturer's recommended tolerance. The decision was made to perform the flight.

The crew walked out to the field where they had identified the best takeoff spot. One co-worker was holding and preparing to launch the drone according to the manufacturer's procedure (an activity he had performed before). The [launch procedure](#) requires holding the drone in front of the body with the propeller near the midsection, starting the propeller, and tossing the drone into the prevailing wind.

As the co-worker tossed the drone into the air, a gust of wind caught the drone and blew it awry, causing the blade to strike the co-worker on the wrist, lacerating his skin in multiple locations.



ANALYSIS

- All current protocols and manufacturer's recommendations for operation were followed at the time of the incident. Further analysis determined the manufacturer's procedure was inadequate and additional PPE should have been required to protect the operator.
- The preflight preparation and assessment did not detect the wind gusts that blew the drone awry during launch.

CORRECTIVE ACTIONS

- **Use of the eBee drone was immediately suspended** unless or until an improved launching system and procedure can be developed that eliminates operator contact-exposure with moving parts.
- Additional guidance will be developed regarding wind and gusts that will be issued by the Central UAS Team for use with all drone flights.
- **Transmission will retire the eBee drone** if a suitable and practical launch alternative cannot be developed.
- Central UAS Department will **contact the manufacturer to report the incident and look for recommendations to mitigate this and other potential issues** related to unknown factors, possibly looking at a no or minimal contact launch technique.

For questions or additional information regarding this incident, please contact [James Pierce](#).

