

## Beyond Visual Line of Sight (107.31) Waiver Trend Analysis

Waiver Application Elements	Command and Control (C2) Link and Emitters Performance Capabilities	Detect-and-Avoid (DAA) Methods	Weather Tracking and Operational Limitations	Training Requirements for Pilots and Other Participating Persons
<p style="text-align: center;"><b>Sufficient Information</b></p> <p style="text-align: center;">--</p> <p>Characteristics of the Beyond Visual Line of Sight (BVLOS) applications approved after requests for additional information</p>	<p>-<b>States and demonstrates</b> max range and envelope that C2 can operate in, <b>taking into account geographic area, environment, and terrain</b></p> <p>-Provides a <b>complete description of each emitter</b>, including the Federal Communications Commission (FCC) grant of authorization and FCC ID number for each transmitter/emitter on the sUA and ground control station</p>	<p>-Detailed <b>descriptions and procedures</b> for risk mitigations to avoid collisions with aircraft (ex. <b>Visual Observers</b>, and technology)</p>	<p>-Details <b>when</b> weather reports will be gathered, <b>what</b> will be gathered, and <b>where</b> they will be taken from.</p> <p>-States <b>weather limitations</b>, such as small unmanned aircraft system (sUAS) manufacturer's limitations or wind speed</p>	<p>-Details and provides means for validating effectiveness of <b>employee training and testing program</b>.</p> <p><b>Example:</b></p> <p>-Lists out courses/subjects covered</p> <p>-Tests corrected to 100% and stored for easy retrieval later</p>
<p style="text-align: center;"><b>Insufficient Information</b></p> <p style="text-align: center;">--</p> <p>Characteristics of the Beyond Visual Line of Sight (BVLOS) applications after requests for additional information</p>	<p>-<b>C2 operational capabilities</b> not evident</p> <p>-Not <b>demonstrating</b> C2 can operate at stated max range or stating the envelope. i.e. <b>lacking data</b></p> <p>-Application did not include <b>FCC grant of authorization</b> or FCC identification number for each emitter on the small unmanned aircraft system (sUAs) and ground control station</p>	<p>-Detailed <b>methods or procedures</b> to see and avoid or detect and avoid participating or non-participating aircraft and non-participating persons/moving vehicles are not evident or adequately described</p> <p><b>Examples:</b></p> <p>-If used, a <b>video feed</b> alone may not be sufficient, because detection would be limited to the direction the camera is pointing (i.e. not 360 degree detection) and does not address avoidance.</p> <p>-If used, <b>Automatic dependent surveillance - broadcast (ADS-B) In</b> alone may not be sufficient because ADS-B In only provides data for cooperative traffic and does not address avoidance.</p>	<p>-<b>Providing general, or no statements</b></p> <p><b>Examples:</b></p> <p>-‘We only fly on clear days’</p> <p>-‘Weather is to be of Visual Flight Rules in nature’</p> <p>- Multiple applications not addressing weather requirements</p>	<p>-Provision of a <b>method of assuring</b> all required persons participating in operation have knowledge in all aspects of BVLOS not evident</p> <p>-Not stating <b>who</b> will have the training, <b>what</b> the training will consist of, or a <b>method of assuring</b> all required persons have been successfully trained</p>