

From: Perry Jones

To: Leann Nguyen

Date: May 12, 2017

Subject: Request for Info - File # 0089-EX-CN-2017

Message:

As IB requests, please submit the following information as soon as possible.

a) Antenna pattern or you can provide in an excel spreadsheet or graph form.

- Pattern's for the 3.5m source antenna and steerable reflector attached as .pdf; to include pictures and description of referenced "Fly Swatter"; steerable reflector antenna and receive station.

b) Explain what does it mean "elevation only steerable"; "x 5' x 3'";

- The reflector antenna plate (A.K.A. "Fly Swatter") is a 5' x 3' x $\frac{1}{2}$ " plate the resides at approx. 490ft level on a 500ft tower which is fixed in azimuth and steerable in elevation for RF peaking at the receive location. The source 3.5m dish located at the base of the 500ft tower radiates in a zenith direction (vertical) and its RF beam strikes the fly swatter. The fly swatter directs the vertical beam to a horizontal direction towards the receive site 2.5miles away.

IB also needs more information on the flat reflector being used which is 490 feet high.

a) What are the dimensions of the reflector (length and width);

- Reflector Panel is 5' x 3' x $\frac{1}{2}$ "; thick flanged edge.

b) is the rotation in the middle of the reflector or edge?

- The fly swatter pivot point is located at the bottom edge of the reflector panel (please review attached pictures of the Fly Swatter)

c) What is the range of rotation (elevation +/-) starting flat (horizontally with the horizon)? The rotation of the flat reflector will reduce the reflective surface area looking underneath from the ground to zenith.

- The fly Swatter reflector is fixed in Azimuth (horizontal direction) but adjustable in Elevation (vertical direction). The range of motion in elevation only is -15 degrees to +5 degrees.

d) How is the CW signal transmitted in the frequency range? By incremental steps? Sweeping the frequency range?

- The transmitted CW signal is at a fixed frequency with the frequency band under test. Typically high, mid and low specified frequencies within the band are used for testing the antenna under test; one specified frequency at a time.