

From: Walter Szczepanski

To: Doug Young

Date: September 11, 2014

Subject: Request for Info - STA File #0775-EX-ST-2014

Message:

Good afternoon, Mr. Young.

Applicant: Helios Remote Sensing Systems, Inc.

File Number: 0775-EX-ST-2014

Correspondence Reference Number: 25112

Helios Remote Sensing Systems, Inc. is building a low power radar that we believe may not require an FCC license. However, to ensure that we do not violate any FCC rules, we have applied for a license to transmit.

The specifics of the radiation are:

Operation in the ISM band: 2.4 GHz to 2.5 GHz

Waveform: Frequency Modulated Continuous Waveform (FMCW)

Radiated peak power: 20 mw maximum

Radiated average power: 20 mw maximum

Transmit antenna gain: 12 dBi maximum

Maximum EIRP: 32 mw

We are under the impression that as long as the transmit power is below 30 dBm and the EIRP is below 36 dBm that we are permitted to operate without a license in the ISM band. Is this incorrect? We are relatively new to FCC regulations and want to ensure that we are operating legally in the United States.

The answers to your questions:

1. You mention that this is for a demo. How come the requested period of operation is six months?

The period of six months was requested since we need to develop the radar prior to demonstration, demonstrate the radar, and then incorporate recommended improvements to the radar. During the development stage (3 months) we need to operate the radar to evaluate its performance and make design adjustments to ensure that the radar operates properly as a radar. Then the demonstration will follow (1 week) and finally we will require a time period to incorporate recommended improvements to the radar (~3 months).

2. You need to be more specific with the description of your areas of operation. The two locations need to be listed separately. Right now you list "Butlerville, IN and Rome, NY" twice. You also need to describe the areas more precisely, usually as coordinates of the center of operations with a radius.

Rome, NY: Latitude: 43°; 12' 58.14" N
 Longitude: 75°; 25' 3.48" W
 Operation within 1 kilometer radius

Butlerville, IN: Latitude: 39°; 2' 59.99" N
 Longitude: 85°; 31' 44.47" W
 Operation within 1 kilometer radius

I believe I at least attempted to fix this on the application, by making two entries - one for the radar operation in Butlerville, IN and one for Rome, NY both with the coordinates above. I believe there is one original entry with both locations (entered incorrectly) but I am unable to delete it. I apologize for confusing things.

3. Could this be operated under 47CFR15 Subpart F?

We do not believe that the radar can be operated under 47CFR15 Subpart F since the radar is not a UWB device. Rather the radar falls significantly short of the guidelines for UWB operation, as defined in 47CFR15, Subpart F15.503 - Definitions.

I had a few issues with the application and most assuredly did not submit it entirely correctly - I apologize. I filled out the application with Walt Szczepanski, our company President, who reviewed the technical information as I inputted it and certified and digitally signed the application.

Please do not hesitate to contact us for any other additional information you may require.

Thank you very much for your assistance.

Best Regards,

Janine Szczepanski