

From: <jscramer@collins.rockwell.com>
To: <chuie@fcc.gov>
Date: 2/23/01 8:16AM
Subject: Re: STA Re: KE2XAG

7751261

Carl,

It seems I was mistaken regarding how the testing will take place. I hope I asked the correct questions and received answers which satisfy your concerns. If not, please let me know.

Thanks for all your help!
Joe Cramer
703-516-8213

----- Forwarded by Joseph S
Cramer/WashingtonDC/Collins/Rockwell on 02/23/2001 07:59 AM

Thomas E Gehrke
02/22/2001 05:18 PM

To: Joseph S Cramer/WashingtonDC/Collins/Rockwell@Rockwell
cc: Thomas E Gehrke/CedarRapids/Collins/Rockwell@Rockwell, Patricia M
Bui/Pomona/Collins/Rockwell@Rockwell

Subject: Re: STA Re: KE2XAG (Document link: Joseph S Cramer)

Please see my reply in RED BOLD

Joseph S Cramer
02/22/2001 03:30 PM

To: Johnnie M Murphy/WashingtonDC/Collins/Rockwell@Rockwell
cc: Thomas E Gehrke/CedarRapids/Collins/Rockwell@Rockwell, Patricia M
Bui/Pomona/Collins/Rockwell@Rockwell

Subject: Re: STA Re: KE2XAG (Document link: Thomas E Gehrke)

Tom,

I just talked to the FCC regarding the STA. Mr. Huie had several questions which need to be answered asap and with enough detail so that I don't have to try to explain it (not a good idea since I am not extremely familiar with the test plan, etc..).

Since the pallet will be on the airplane: Sorry for the confusion. The pallet is not on an aircraft, it is at a fixed location on the ground (top of a building, but less than 6 meters above building) at the location given in the STA paper work.

1. What will be the maximum altitude of the aircraft? N/A, See above.
2. What will be the radius around Pomona where the aircraft will fly? (in km or miles) N/A, See above.
3. We give a range of frequencies which will be used, (1.52 GHz to 1.66 GHz). I believe the bottom range is 1.525, can you confirm. Also! I need to know the uplink vs. the downlink frequencies which will be used. This is very important. The range of frequencies that I gave are the frequency range of the antenna. The actual frequency ranges for the INMARSAT system is a small subset of that frequency range. The transmit frequencies are: 1626.5 - 1660.5 MHz. The receive frequencies are: 1530 - 1559 MHz. Transmit direction is from the ground (AES) to the satellite, receive is from the satellite to the ground (AES).
4. We stated that the ERP from the antenna is 828 Watts. Is this correct? Yes, the maximum Effective Radiated Power from the antenna can be up to 828 watts. This the maximum that the equipment could produce. The actual power used during operation is much less. If so, the FCC will not grant the STA unless we explain to them how we will prevent us interfering with INMARSAT users in the area. I was told that other users of these frequencies will be affected by our use given what we have told the FCC. Our SATCOM system is a fully tested pallet using production equipment which has been type accepted by the FCC and accepted by INMARSAT. The operation of the SATCOM INMARSAT system includes all the satellite/AES management details on power levels and frequency assignments. Therefore, during operation, all power and frequencies assignments are under the direct control of the INMARSAT satellite system. The INMARSAT system does include a power back-off control so that minimum power necessary is used at all times. The system would not interfere with other INMARSAT users in the area, due to it being under INMARSAT control at all times. The user does not have any manual control over the frequency or power of the emissions, control is provided by the satellite system. The pallet is a functional equivalent of an INMARSAT Aircraft Earth Station (AES) but at a fixed ground location.

Please respond asap. The FCC will not grant the STA until these concerns are alleviated.

Hope this clears up everything. Sorry about the confusion on fix location on the ground versus a aircraft. Also, I got mislead from the questions in that it wanted details on the antenna parameters not exact details on operation of the unit. The main thing to remember is that this is just a pallet that duplicates actual AES equipment (hundreds of units) that is in service all over the world.

Thanks!
Joe

Johnnie M Murphy