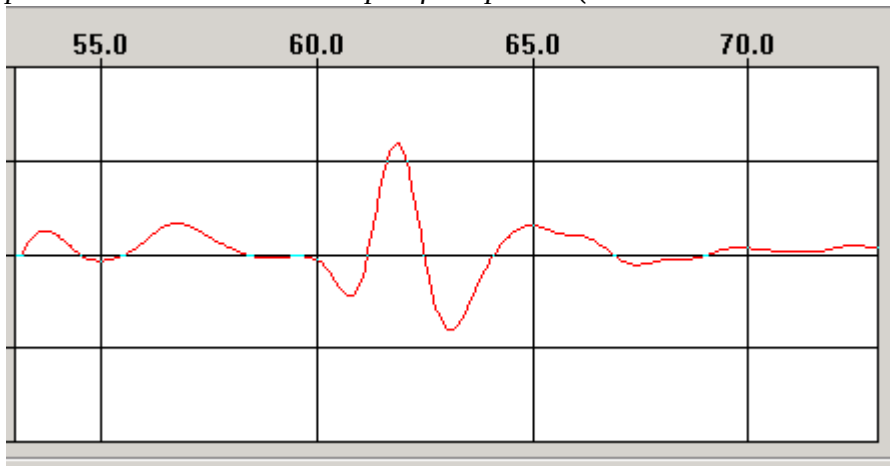


To: Alan Schutz, Geophysical Survey Systems Inc
From: Andy Leimer
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FCC Application Processing Branch

Re: FCC ID QF75106
Applicant: Geophysical Survey Systems, Inc.
Correspondence Reference Number: 23481
731 Confirmation Number: EA740530

1) More information is needed on the 0.5 ns pulse. Is the pulse pseudo random (dithered) or is it periodic (You mentioned a maximum PRF of 100 kHz). Upload a plot of the pulse.

The pulse is not dithered, it is a fixed frequency. 100 KHz is the maximum allowable PRF because that is the frequency at which the emissions test was performed. The picture below shows the shape of the pulse. (The horizontal scale is in ns.)



2) Measurements from 960 MHz to 1 GHz were done using a horn antenna. Remeasure this band using a bicon antenna.

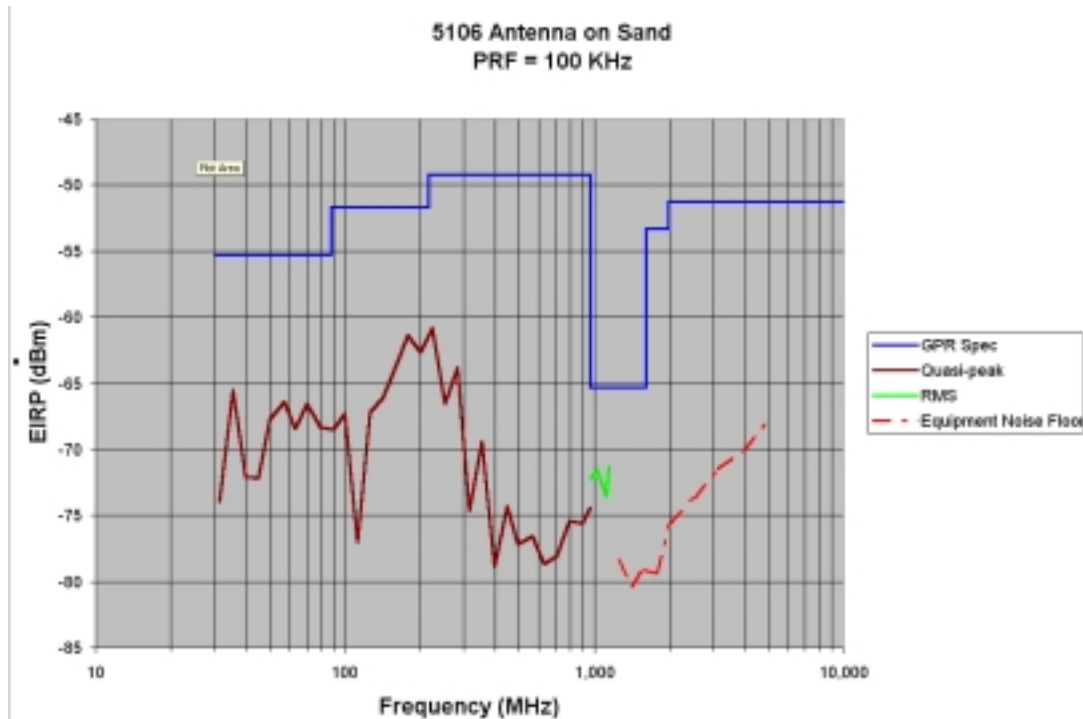
The horn antenna is calibrated down to 900MHz so the bicon should not be necessary. There are no emissions above 960 that are not related to the UWB transmission so no quasi-peak data is presented. To cover the entire range from 30 MHz to 10 GHz, two different setups were used, including changing the analyzer, antenna, cables, preamp and procedure. If we can't use the horn between 960 and 1000, then a third setup is required.

3) It appears that there is no shielding above the antenna. What measures have been taken to ensure that the emissions from the top of the device are less than the ground penetrating emissions.

The antenna is entirely within a shielded metal box. Only the bottom is open (where the fans are).

4) There is a procedure in the test report for the -10 dB points but no data or plots. Upload a spectrum plot and data for the -10 dB points. I suggest a field strength measurement for these points to account for non-linearities across the band that would be on the spectrum plot (ie: antenna and amplifier is not equal across the band).

From the plot below, the peak is at 224 MHz. The lower -10 dB point is 112 MHz. The upper -10 dB point is 316 MHz. All data has already been corrected for antenna, amplifier, cables, etc. The data tables are in the test report.



5) What type of imaging system is this (low, mid, or high frequency). What is the center frequency?

This is a low frequency system. The center frequency is 214 MHz.

6) Heading missing on some test data tables. Upload corrected tables with the proper headings as shown in Table 1 of the Test Data.

7) The formula used for determining RMS level of the emission is not clear. Show how this was derived. Upload all data used for this calculation and provide a sample calculation.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60

days of the original e-mail date may result in application dismissal pursuant to Section 2.917 (c) and forfeiture of the filing fee pursuant to section 1.1108.

DO NOT reply to this e-mail by using the Reply button. In order for your response to be processed expeditiously, you must upload your response via the Internet at www.fcc.gov, Electronic Filing, OET Equipment Authorization Electronic Filing. If the response is submitted through Add Attachments, in order to expedite processing, a message which informs the processing staff that a new exhibit has been submitted must also be submitted via Submit Correspondence. Also, please note that partial responses increase processing time and should not be submitted.

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