To: Joe Dichoso
FCC Application Processing Branch

Re: FCC ID QF75103
Applicant: Geophysical Survey Systems, Inc.
Correspondence Reference Number: 23931
731 Confirmation Number: EA968303

1) The pulse has no carrier frequency. It is a single cycle of approximately 2.5ns. The pulse repetition frequency is fixed at 100kHz.

2) Measurements were made at 960MHz with a log-periodic antenna for Part 15C (18.6dBuV/m; EIRP = -76.6dBm). The measured levels using the horn antenna at 960MHz for Part 15F were approximately 10dB higher (EIRP = -66.5dBm). According to CISPR 16-1 the QP/RMS comparison is 20dB at a PRF of 100Hz. At 10kHz (10% of actual repetition rate) the pulse response curve reduces this value by ~12dB, resulting in expected difference between RMS and QP of approximately 8dB. As the log-periodic is actually 10dB lower, the horn antenna data is considered to be adequately representative.

3) The new Test Report Exhibit – file name "*5103_plot.pdf* "– is representative of the –10dB bandwidth. These levels have been corrected for antenna factor, cable loss and preamp.

4) The original test data was acquired with a 20mS sweep time. In each 20ms sweep there are 1000 acquired points resulting in one sample every 20 s. The spectrum analyzer was in sample mode so each sweep represents 'instantaneous' levels, as required by paragraph 3 of Appendix F of FCC R&O Docket 98-153. The analyzer was single sweep, manually triggered to capture a worst case sweep, with the maximum measurable number of pulses.

   In order to reduce the time over which the RMS is calculated, the time (0-20ms) at which the maximum signal is present was recorded as Tmax. RMS calculations were then performed from Tmax-0.5ms to Tmax+0.5ms using the number of samples recorded in that time. This results in an integration time of 1ms. There are 650 data points for this reduced integration time. The acquired data and table of final data is contained in Table 2 of Section 3.5 of the new Test Report exhibit - file name "*Revised_5103_Final Report_revD.doc*".

   A sample calculation is submitted as the new Test Report exhibit – file name "*SampleCalc_5103a.pdf*"

5) "The device is used in contact with the ground. However, the R&O does indicate that a spacing of 1 meter or less is permissible. In any case, being away from the ground seriously degrades the data. The antenna is constructed as a five-sided metal box, with the antenna fans in the sixth side, on the ground side. The deadman switch, 10 second timeout, and forbidding wall imaging is all described in the Manual MN30-191 Rev-A. This Updated manual is being uploaded along with this document."

6) A photograph of the label location is contained in the new Label exhibit - file name "*5103 LABEL LOCATION.doc*"