Lockheed Martin Sippican, Inc even Barnabas Road
Marion, MA 02738
Telephone 508-748-1160 Facsimile 508-748-1718

Date: 29 November, 2011

Attn: Federal Communications Commission
Experimental Radio Service

Subject: Exhibit 1
Government Project Information

Ref: File TBD
Call Sign TBD

Dear Sirs,

Lockheed Martin Sippican, Inc requests this FCC license to allow transmission of frequencies to verify the proper operation of the MKIIA Radiosonde during routine Factory Acceptance and Developmental testing under contract number DG133W-11-CQ-0011, to supply radiosondes to the National Weather Service (NWS).

In support of this contract Lockheed Martin Sippican, Inc will be testing Radiosondes as part of a Quality Assurance sampling program to monitor and maintain the quality of the products delivered to the NWS. In addition, development testing of Radiosondes will be conducted to evaluate sensor improvements.

Lockheed Martin Sippican, Inc will produce two Radiosonde model numbers, 1649-540 and 1649-540-1, which utilize the same transmitter and antenna. The Radiosonde transmitter uses a patch antenna that directs transmitted power towards the ground.

During testing, the Radiosondes are attached to a weather balloon and deployed from the Lockheed Martin Sippican, Inc facility at 7 Barnabas Road, Marion MA. The weather balloon can travel a ground distance of 250km and reach a height of 30km. The average duration of the deployment is 135 minutes. The expected number of deployments is on the order of 5 per month.

Station Location

7 Barnabas Rd
Marion MA 02738
United States
41^0 42’ 35.09” lat
70^0 46’ 23.58” long
Ground elevation 10 meters above sea level
Receive antenna elevation 13 meters above ground elevation and is less than 6 meters above the roof.
The New Bedford airport is the closest airport, 15.9km away from the launch site.

Radiosonde Transmitter

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4 Fixed transmit carrier frequencies (MHz):
- 1676.0 MHz
- 1678.0 MHz
- 1680.0 MHz
- 1682.0 MHz

Frequency tolerance +/- 25ppm
Mean TX Power 500mW (27.0dBm)
Emission Designator 135K5F1D
FSK with a maximum modulating frequency of 12 kHz
Maximum Peak deviation is 50 KHz
Patch antenna LHCP
Main beam gain 4.3dBi
Horizontal Beamwidth 360 degrees
Vertical Beamwidth 45 degrees

Please do not hesitate to contact me with any questions concerning this request.

Regards,

Philip Kelley
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