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14 September 2006

Modification of Waiver Request

Mr. Julius Knapp, Acting Chief
Federal Communications Commission
Office of Engineering Technology
445 12th Street, S.W.
Washington, DC 20554

Re: *In the Matter of Multispectral Solutions, Inc.'s Request for a Waiver of Part 15 of the Rules*, ET Docket No. 06-103.

Dear Mr. Knapp:

On April 12, 2006, Multispectral Solutions, Inc. (MSSI) filed a request for a waiver of Part 15 of the Commission's rules to enable its ultra wideband (UWB)-based, radio frequency identification (RFID) and real-time location system (RTLS), *Sapphire DART* (current FCC ID: QCJPAL6511X1) to operate with a 12.75 dB increase in the peak power, without affecting the average power for transmitters operating under Section 15.250 in the 5925-7250 MHz band.¹ Specifically, MSSI requested a waiver of Part 15.250 of the Commission's rules as follows:

"Modify 15.250(d)(3) to read: 'The peak EIRP limit is $12.75 + 20 \log(\text{RBW}/50)$ dBm where RBW is the resolution bandwidth in megahertz that is employed by the measurement instrument. RBW shall not be lower than 1 MHz or greater than 50 MHz.'"²

¹ *Ex Parte Letter to Mr. Julius Knapp from Multispectral Solutions, Inc.*, ET Docket No. 06-103 (filed April 12, 2006).

² *Id.* at 2.

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In addition, the waiver request limited the operation of MSSSI's *Sapphire* DART system to (i) the tracking and identification of assets and personnel in petrochemical facilities, and (ii) the tracking and identification of livestock.

The primary purpose of MSSSI's waiver request was to enable the development of a reliable and economically attractive RFID and RTLS system that protects human life in high risk industrial settings without causing harmful interference. MSSSI's system could also prove useful in tracking livestock. Nonetheless, based upon the public comments filed in this docket that expressed interference concerns related to the application of its system to the tracking of livestock, MSSSI is willing to forego any request to apply this application to livestock tracking to facilitate its request.

Due to the fixed nature of MSSSI's receiver architecture at an industrial facility, UWB transmissions are required only while an employee is present on the site. As such, MSSSI plans to add a system feature that automatically deactivates UWB emissions when an employee leaves the site. This feature will alleviate any fears of harmful interference outside of the facility and will significantly prolong the life of the tag battery.

Finally, MSSSI believes that its system can help protect human life in *all* high risk industrial environments and, thus, modifies its original waiver request to include additional high risk sites beyond petrochemical facilities.

Based on foregoing, MSSSI respectfully submits that its Waiver Request to the Part 15 rules be amended as follows:

Modify 15.250(d)(3) to read: "The peak EIRP limit is $12.75 + 20 \log(\text{RBW}/50)$ dBm where RBW is the resolution bandwidth in megahertz that is employed by the measurement instrument. RBW shall not be lower than 1 MHz or greater than 50 MHz."

With the following conditions:

- Applications are limited to high risk industrial sites such as Petroleum Facilities (production and storage), Chemical Facilities (production and storage), Power Plants (nuclear, hydraulic, electric), Mills (Steel, Paper, Pulp, etc.), Mines of all types and similar potentially hazardous industrial sites where real time personnel tracking is required for safety purposes.
- All *Sapphire* DART tags will automatically deactivate without human intervention when an employee leaves the site.

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It is our belief that the suggested modifications to our waiver emphasize MSSSI's desire to protect human life while eliminating any legitimate interference concerns. Therefore, we urge the Commission to move expeditiously to grant this waiver request as amended.

Respectfully Submitted,



Edmond J. Thomas

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Policy Advisor to MSSSI



/s/ Robert L. J. Fontana
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