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Via E-mail and U.S. Mail
James.Burtle@fcc.gov

Mr. James Burtle, Chief
Experimental Licensing Branch
Electromagnetic Compatibility Division
Federal Communications Commission
445-12th Street, S.W.
Washington, D.C. 20554

Re: Granted Experimental Authorization WF2XNH and Pending
Modification Application 0010-EX-ML-2011; Sensus Spectrum, LLC

Dear Mr. Burtle:

This is in response to the letter of Julian P. Gehman dated April 29, 2011 on behalf of Sensus Spectrum, LLC of McLean, Virginia. Mr. Gehman's letter responds to the request by ARRL, the national association for Amateur Radio dated April 28, 2011 seeking rescission of Experimental Authorization WF2XNH and denial of the application now on file for modification of that authorization to add certain experimental locations to the existing authorization. Mr. Gehman suggests various procedural reasons why he believes that ARRL's complaint should be "disregarded." His defense of this experimental facility grant and the pending application is not well taken for the following reasons.

Mr. Gehman first suggests that ARRL has not established any violation by the Experimental Licensing Branch or the Office of Engineering and Technology of the Commission's rules or applicable law. ARRL never suggested that any such "violation" occurred. What ARRL does suggest, however, is that the grant of this experimental license is incompatible with ongoing, regular licensed Amateur Radio operation and that the license was therefore improvidently granted. ARRL filed a very simple request that the granted authorization be rescinded and that the pending modification application be denied. This, ARRL is entitled to request. Section 5.83(b) of the Commission's rules provides that experimental authorizations are subject to change or cancellation by the Commission "at any time without hearing if in its discretion the need for such action arises." It is obvious that the operation proposed by Sensus Spectrum is fundamentally incompatible with ongoing Amateur Radio operation in the 420-430 MHz band. Amateur

Radio stations, both fixed and mobile, operate in the 420-430 MHz band ubiquitously, using very sensitive receivers. Mobile, unidentified transmissions from Sensus Spectrum devices in this same segment, with 4.8 kHz bandwidth, at power levels of up to 50 watts ERP will undoubtedly interfere with Amateur operations in the same band over a wide geographic area. To the extent that Sensus intends to conduct operations between 410 and 420 MHz, which is below the Amateur 420-450 MHz allocation, ARRL interposes no objection.

Mr. Gehman suggests that ARRL's complaint that there was no coordination requirement imposed on Sensus Spectrum's experimental authorization constitutes a proposal for rulemaking. Not so. A review of Section 5.85(e) of the Commission's Rules is instructive. In relevant, part, that subsection reads as follows: "The Commission may, at its discretion, condition any experimental license or STA on the requirement that before commencing operation, the new licensee coordinate its proposed facility with other licensees that may receive interference as a result of the new licensee's operations." Such a condition was not attached to this license, and Sensus Spectrum does not propose to conduct any such coordination. Mr. Gehman's overly strident response to ARRL's complaint makes it quite plain that: (1) Sensus Spectrum has no intention of coordinating its experimental operations with ARRL or any Amateur Radio coordination group voluntarily, and (2) it seems to be completely unaware of its obligation to avoid causing interference to licensed radio services such as the Amateur Service.

Mr. Gehman suggests that ARRL's claimed entitlement to interference protection is "improper." The rules say otherwise. Section 5.85(c) of the Commission's Rules, which states that frequency assignments will be granted "only on the condition that harmful interference will not be caused to any station operating in accordance with the Table of Frequency Allocations of Part 2" of the Commission's Rules could not be more plain. Mr. Gehman faults ARRL for failing to note that Amateur Radio operations in the 420-430 MHz band are on a "secondary" basis, citing Section 97.303 of the Commission's rules. He is apparently unaware that the status of Amateur Radio in the Table of Frequency Allocations relative to the 420-450 MHz band is secondary *only* to Government Radiolocation, which has a primary allocation in the same band. *No allocated radio service is secondary to an experimental license holder.* Furthermore, the experimental grant specifies the normal non-interference requirement, but there is no practical way for Sensus to comply with it, given its operating parameters.

Section 5.85(c) states the definitive obligation of Experimental license holders. Sensus Spectrum has made no representation whatsoever with respect to the means by which it intends to comply with this rule section. It is precisely the inability to protect licensed radio services operating in accordance with the Table of Allocations which obligates the Commission to rescind this experimental authorization. There is nothing whatsoever in the four corners of Sensus' application which was granted, and there is nothing in the pending modification application, which explains how Sensus could possibly avoid interference from its unidentified, high-power, narrow-bandwidth mobile operations to fixed and mobile Amateur Radio stations which operate ubiquitously and

regularly in the 420-430 MHz segment of the 420-450 MHz band. ARRL suggests that Sensus in fact cannot avoid such interference.

Gehman challenges ARRL's claim of fundamental incompatibility by claiming that (a) ARRL has failed to claim any instance of actual interference; and (b) that Sensus Spectrum has had previous experimental authorizations in the past pursuant to WE9XCR specifying "identical or substantially similar experimental operations" including "the power levels and service areas complained of" in ARRL's letter without "actual harm."

It is not the obligation of Amateur Radio operators to suffer actual harmful interference before an experimental authorization can be rescinded. Quite the contrary, it is the absolute obligation of the authorization holder to avoid interference *ex ante*, which Sensus cannot do. It is the Commission's obligation to not grant experimental authorizations where same-frequency interference is highly likely or inevitable. Sensus' prior operations were *not* pursuant to an experimental authorization, but rather pursuant to an STA, specifying a single location in Covington, Louisiana in a *different band*, 412-422 MHz. Ostensibly, that STA was obtained (according to correspondence from Sensus; see File No. 0507-EX-ST-2009) in order to develop a product for use outside the United States. There is no indication why it is necessary to deploy the Sensus device at multiple locations throughout the United States, or for the period of time authorized by Sensus' experimental authorization. Nor is there any justification offered by Sensus for the use of the 420-430 MHz band whatsoever.


It is not surprising that Sensus claims an absence of actual interference from its STA and experimental operations to date. Sensus is operating a mobile, unidentified device during unspecified times and locations with an unspecified duty cycle. Mr. Gehman's cavalier statement that an Amateur Radio licensee experiencing interference in the 420-430 MHz band can simply consult the Commission's database and thereby identify the source of interference is, frankly, worse than naïve. If a source of interference cannot be determined or identified at the time of the interference, it cannot be complained of. The absence of interference complaints to date (assuming *arguendo* that there is an absence of interference complaints to date) is indicative of nothing.

Finally, Gehman cites another experimental authorization that was granted to Lockheed-Martin recently in the 420-450 MHz band, at a power level of 153 watts. While that grant has nothing to do with this one, to the extent that Gehman offers it as a justification for experimental authorizations in the 420-450 MHz band at high power, the comparison is inappropriate. The Lockheed-Martin authorization specifies operation at a single location and an occupied bandwidth of 4.25 MHz. Therefore, the power spectral density is far, far lower than the operation of Sensus.

Therefore, as stated previously, Sensus' operation as specified will inevitably cause harmful interference to ongoing Amateur Radio operations in the band 420-430 MHz, and the interference victims will be incapable of identifying or reporting the source of the interference. Because of this fundamental incompatibility with ongoing licensed Amateur Radio operation, and the inability of Sensus to articulate any method of

avoiding the interference (and the apparent unwillingness to accept its obligation to avoid the interference), it is obvious that the authorization was improvidently granted. ARRL again respectfully requests that the experimental authorization be rescinded without delay and the modification application denied, at least with respect to the 420-430 MHz segment.

Respectfully submitted,



Christopher D. Imlay
General Counsel, ARRL

Cc: Julius Knapp, OET
Stanton Woodcock, Sensus Spectrum
Julian P. Gehman
(via e-mail only)