To: Desmond Fraser, Rhein Tech Laboratories
From: Joe Dichoso
jdichoso@fcc.gov
FCC Application Processing Branch

Re: FCC ID MQOTT600-40300
Applicant: Vocollect Inc
Correspondence Reference Number: 23784 (and 23785 duplicate correspondence)
731 Confirmation Number: EA244477

1) In regards to 7/18/02 email from D. Zatezalo to FCC Lab staff requesting that SAR test data performed on a specific FCC ID radio card be applicable to different FCC ID and grantee but similar original equipment manufacture (OEM) radio cards, we have the following comments. The FCC ID is intended for a specific Tx within a specific host, not for the host alone. It is not known a priori that cards with different FCC IDs will have equivalent spurious emissions, RF current distributions and interations within the host, interface characteristics, etc, so separate RF exposure evaluations would likely be needed. Compliance is determined and device certifications are granted by the FCC after review of an application and supporting data for a specific device installed and tested only in a specific host. FCC cannot predict compliance for unreported device configurations. The SAR results in this filing seem to indicate a sufficient margin within the general population limits. Suppl. C section 3 footnote 14 indicates SAR evaluation may be needed for some 100mW spread spectrum devices. Those items could be cited in a statement confirming compliance in filings for similar devices, which filings would be reviewed by FCC on a case-by-case basis. Per 15.247 (b) (5) grantee has responsibility that device operates in a manner that ensures the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

RESPONSE: Thank you for this clarification.

2) In regards to 7/18/02 email from D. Zatezalo to FCC Lab staff stating the device is required to meet the Occupational/Controlled limits for SAR, we have the following comments. The intent of unlicensed Part 15 is consumer use, so compliance should be evaluated with respect to general population exposure limits. Operating under occupational limits requires labels, training, etc., as described in OET 65 Supplement C and elsewhere. In this filing users manual has "Operator Training" section, but RF exposure control is not described. Manual page 177 states for home and office use.

RESPONSE: The SAR Testing was done, and proved passing results, for uncontrolled/general population limits, which is what the client wanted to achieve.

The user’s manual uploaded with this application is actually an Adobe Acrobat version of the applicant’s on-line documentation. It includes two Vocollect products, the Talkman T2 (TT-600) and the older product, Talkman Open. User’s manual page 177 is actually about the older Talkman Open product, and does not apply to the Talkman T2. We have edited this hardcopy version of the on-line user documentation to eliminate much of the Talkman Open documentation, and to eliminate confusion. The relevant pages for the Talkman T2 product with respect to this issue are pages 12-14, with the RF Exposure statement on page 13. Please refer to the revised Manual, uploaded under User Manuals.

3) FYI it assumed that device is "banana shaped" to fit curve of users body. It could be considered to evaluate SAR using curved section of phantom, e.g., head, to better simulate curved abdomen position. Such additional testing is not requested since SAR is low in this filing.

RESPONSE: Thank you for this confirmation.

4) Please submit internal photo or sketch side view indicating relative position of antenna within case.

RESPONSE: Please see photo named "Relative Position of Antenna Within the Case" uploaded under Internal Photographs to see the relative position of the antenna within the case.

5) Users manual pg 181 "FCC Guidelines for Wearing the Terminal" - please submit revised page - FCC does not provide guidelines for wearing specific terminals.

RESPONSE: As stated previously, the user's manual provided with the application submission includes the Talkman T2 and the Talkman Open. The Talkman Open is an older Vocollect product, and users manual page 181 actually refers to this older Talkman Open product. The relevant pages for the Talkman T2 product are pages 12-14. Please refer to the revised Manual, uploaded under User Manuals.

6) Users manual lists specific belts and belt clips. Please describe how SAR report accounts for all belt and clip options.

RESPONSE: The Talkman T2 currently has one clip option only. The user must utilize Vocollect's specially designed slim belt clip and customized belt. The trouser clips are no longer available. The SAR testing was done with the only belt and belt attachment method available, under the worst case scenario with the unit as close to the phantom as possible. Please refer to the revised Manual, uploaded under User Manuals.

EMC issues...
(7) Provide photo's of both sides of the RF circuit board without shielding.

RESPONSE: Please refer to the photos named "RF Circuit Board Without Shielding", uploaded under Internal Photographs.

(8) Indicate whether the power sensor used for making output power measurements were peak or average. Peak measurements are required. Indicate the make and model number of the power sensor used. Ensure that the bandwidth is greater than the 6 dB BW of the device.

RESPONSE: The conducted power in the original report was peak conducted power. We measured peak conducted power using the substitution method, however, the measurement were also made using the Agilent E4416A EPM-P Series Power Meter with an Agilent E9323A Peak and Average Power Sensor. The results were corroborated with the substitution method.

The substitution method was conducted as follows: The EUT was connected to the Tektronix TDS 540B oscilloscope via an HP 8471E Coaxial RF and Microwave Detector and appropriate attenuation. The EUT was set to continuously transmit and the maximum voltage deviation on the oscilloscope was recorded

for each of the channels. An HP 8648C Signal Generator was then connected to an HP 8449B Preamplifier, which in turn was connected to the oscilloscope via the detector and attenuation used above. The same oscilloscope deviation recorded above was replicated by adjusting the signal generator. The signal generator amplitude was recorded for each of the three channels. The signal generator, amplifier and associated cables were then connected to the Agilent E4416A EPM-P Series Power Meter using an Agilent E9323A Peak and Average Power Sensor. A correction factor including the amplifier gain and cable loss was determined for each of the three channels and recorded. This correction factor was added to the signal generator amplitudes to determine the conducted peak power levels above.

Sincerely,

Desmond Fraser, President, Rhein Tech Laboratories

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.

Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.