RE: Andrew Corporation
FCC ID: BCR-M5B8019
After a review of the submitted information, I have a few comments on the above referenced Application. Depending on your responses, kindly understand there may be additional comments.

1) Because uploads are now necessary of all documentation to IC, kindly provide a confidentiality letter for the IC related portion of the filing as well.
Please find IC confidentiality request

2) For previous comment 2, you cite that a BOM is now provided. However there is not an easy way to cross reference values to reference designators given the information provided (i.e. reference designators do not match). Additionally, now that this application is being divided into 2 applications for the different components, and given the unique nature of the devices, it is uncertain which schematics still apply here fro this application, and which ones should be removed from the application. Please correct and comment on the following schematics:
All of the provided schematics are relevant since the signals pass through the main unit (the device in this filing) whether they are going out to the extension unit or directly to the combiner unit. This is why we believed this should one filing. In other words, the control circuits for the extension unit are actually located in the unit for this filing (the 8019 Main unit).

3) While we understand that RF exposure may be handled by licensing for fixed outdoor use, there are some concerns for indoor use since this is typically a mobile category – not fixed for purposes of RF exposure. First, note that RF exposure information was not provided for 850 MHz indoor.
Please find RF exposure information for 850 MHz indoor application. When this system is installed indoors it is always in a restricted area that can be secured. In the past FCC has allowed the manufacturer to categorize this as indoor fixed installation instead of mobile.

Please explain. Additionally, please note that RF exposure evaluation (i.e. measurements) are required by 2.1091 for < 1.5 GHz range if the ERP is > 1.5 Watts (i.e. EIRP > 2.46 Watts). Currently information provided for 1900 MHz indoor shows and EIRP of 2.512 W. This is acceptable for > 1.5 GHz since this allows for 3.0 Watts ERP (4.92 Watts EIRP), but not for < 1.5 GHz. Please review.
This applies to mobile applications which are defined as “designed to be used in other than fixed locations” according to Part 2.1091. This device will never be installed as a mobile installation as defined by the rules. It will be installed in either an outdoor fixed installation or indoor fixed installation. Further, I am unclear how we can perform power meaningful power density measurements without having access to the specific antenna that will be used in the installation.

4) To further comment 3 above, the RF power provided is per RF output per band (as given earlier response). However it appears that all outputs are multi-plexed together to a single antenna – and also may include FCC ID: BCR-M5B9017. If this is the case, please note that RF exposure should consider all Transmitters in its evaluation as appropriate.
The minimum separation distance is meant to be between the antenna (which is at the output of the combiner) and nearby persons. The rf power output that would be listed on this grant would go through the same combiner as the associated grant (for the extension unit). Since these are separate filings it is unclear how we should address this.

5) Users manual may be affected by 3 and 4 above.

6) The matrix provided only shows Analogue from 851 – 869, but it appears that F3E on the 731 is shown for both 851 – 869 and 869 – 894 MHz. Please explain.
This was simply left off of the matrix as an oversight

7) Test report page 6 and other pages shows iDEN as GXW, but 731 form appears to show this as F1D. Please review/explain.
This was an error on the Form 731. I have updated this form.

8) 731 form appears to show TDMA (DXW for 869 – 894), but this is not shown in the matrix. Please explain.
This was simply left off of the matrix as an oversight

9) Kindly explain reference to Part 22 500 Watt ERP limit in the test report power section when other information supports 17 dBi antenna which would exceed this level.
Even though this type of device may go under an existing license, the installation must still comply with the terms of the license which includes maximum rf power. Since this is not a Part 15 device and thus is not restricted to a specific antenna but only a maximum antenna gain for rf exposure, the rf power output + antenna gain are usually not part of the equipment approval. We should list maximum rf conducted power on the grant, not erp or eirp.

10) For SMR services, it is uncertain if 90 Subpart S compliance has been shown, especially relevant to 90.669 and 90.691.
We have clearly shown compliance with the 43+10 log(P) requirement of 90.669 and the -20 dBm limit of 90.691 (on band edges).

11) The RSS-102 attestation appears to miscalculate the value shown. (Note: 10 W/m^2 = 1 mW/cm^2). Value would appear to be 5 W/m^2.
Please find a corrected attestation

12) Despite the fact that FCC only requires worse case to be reported, IC generally requires a low, middle, and high channel – see RSS-GEN Section 4.3. Has low, middle, and high been investigated so that a statement can be made about such tests as power, spurious, etc?
The RSS 131 standard does not require this. The rf power output is measured using two CW tones and spurious emissions is measured using the same two tones. This is not a transmitter but a wideband amplifier system without channel filtering. We simply followed the requirements listed in the RSS 131 standard.

13) FYI….Kindly use the most recent IC Form in the future. It appear you used Rev. 9, while current revision if Rev. 14.
I have resubmitted the IC form using the newest revision.