COMMENTS TO ET DOCKET NO 10-27

Radar is since several years the leading method for the measurement of the filling level of liquids, granulates etc. in all kinds of industrial use. So far level probing radars (LPR) has been used in closed tanks (TLPR=Tank Level Probing Radar) which efficiently limits the emission of radiofrequency emission. Grant of equipment authorization has been issued under FCC Part 15 and corresponding rules in other countries. Not the least for general installation requirements (typically used in 4-20 mA systems) all LPRs are low power units.

ET Docket No. 10-27 from Ohmart/Vega is a request for a waiver of section 15.252 and 15.35 to permit authorization of a level probing radar (LPR) outside of closed tanks, installed at fixed locations and operating in the 24.6-27 GHz band. Many manufacturers, among them Emerson Process Managements (EPM), have similar LPR-products intended for similar use. The waiver is supported by Emerson and some comments and suggestions are given below.

Emerson Process Management (EPM and its predecessor SAAB Marine Electronics for radar level gauges) was the first company using radar for level gauging and 1991 the first FCC authorization was granted for EPM radar level gauges used in closed tanks (TLPR). An FCC authorization for the same radar level gauges modified for limited use outside of closed tanks was done 1995/1996. Within European ETSI standardization work for LPRs outside of closed tanks has been worked on the last years within an industrial group with all major manufacturers as members. One result from that work is a detailed study of possible interference which has recently been published as ECC report 139 (draft). With suitable limitations included in the LPR-specification the report shows the interference to be acceptable.

EPM like to underline that many level radars on the market are based on other principles than the pulsed system described in the Ohmart/Vega waiver. On the market so far systems using a swept or stepped frequency (FMCW) are also very common and obviously they have lower peak powers than pulsed systems. With regard to commonly known radar technology other systems can be expected to occur (various kinds of modulation etc.) so the general limitations and test methods for peak and average power should be applied without requirements for a specific type of system solution.

Emerson Process Management is interested in the applications covered by this waiver and would like to be included in the waiver.