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Mr. Ronald C. LaBarca
President
U.S. Radar Inc.
P. O. Box 319
Matawan, New Jersey 07747

Dear Mr. LaBarca:

This is in reply to your letter of January 28, 1998, requesting a waiver of Part 15 of the Commission's rules to permit the authorization of a ground-penetrating radar system manufactured by ERA Technology and known as SPRscan. The SPRscan is an impulse radar system employing antennas centered at 250 MHz, 500 MHz, 1000 MHz and 2000 MHz.

Specifically, you request a waiver of the prohibition against operation within the restricted bands (§ 15.205), the prohibition against operation within the TV broadcast bands (§ 15.209(a)), the application of a pulse desensitization correction factor (§§ 15.31 and 15.35), and the prohibition against employing a Class B, damped wave emission (§§ 2.201 and 15.5). In support of your waiver request, you state that emissions from the SPRscan are below 40 dBuV/m at a distance of 3 meters. This indicates that the equipment is capable of complying with our general emission limits in § 15.209 of the rules. You also state that you will limit the marketing of this product to 25 units, that users will be required to maintain a log of operations, that the equipment will contain a "dead man's handle" which must be physically depressed to activate the transmitter, and that the equipment will contain a proximity sensor to ensure that the transmitter shuts off if the antenna is moved off of the surface being investigated. Based on these parameters, you express confidence that there is a low probability that interference would be caused to other radio operations.

As the frequencies that will be used include several frequency bands allocated to the U.S. Government, we coordinated the waiver request with the National Telecommunications and Information Administration (NTIA). On June 15, 1999, NTIA informed us that the waiver can be granted with certain conditions. A copy of the NTIA letter and attachment setting forth the conditions is enclosed.

It is a well-established principle that the Commission will waive its rules only if it determines, after careful consideration of all pertinent factors, that such a grant would serve the public interest without undermining the policy which the rule in question is intended to serve. *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969). In discussing the treatment of requests for waivers of established rules, the court in *WAIT Radio* emphasized that the agency's discretion in

applying general rules is intimately linked to the existence of "a safety valve procedure" to permit consideration of an application for exemption based on special circumstances. *Id.* Indeed, the court considered a rule most likely to be undercut if it does not take into account "considerations of hardship, equity, or more effective implementation of overall policy...." *Id.* at 1159.

We believe that the requested waiver would serve the public interest by allowing U.S. Radar to supply a radar system that is capable of detecting plastic gas pipes, assessing roads, bridges, runways and similar structures for structural integrity, being used in forensic searches, and other similar functions. Furthermore, based on the conditions specified in your request we believe that there is a low probability that harmful interference would be caused by ground-penetrating radar systems. Preventing interference to other radio services is the primary purpose of the standards in Part 15. Thus, it does not appear that the requested waiver would undermine the policy of our rules.

Accordingly, under the authority contained in Sections 0.31(i) and 0.241(a) of the Commission's regulations, 47 CFR § 0.31 (i) and 0.241 (a), a waiver is hereby granted to U.S. Radar to permit it to market the radar systems described in its petition. This waiver is subject to the following conditions:

- 1) The waiver is limited to ground-penetrating radar systems. Radar systems designed to penetrate walls or other surfaces are not being permitted under this waiver due to the lower level of attenuation of the radiated signals and the higher potential for interference.
- 2) A grant of certification must be obtained for the transmitter, demonstrating compliance with the general emission limits in § 15.209 as well as the other applicable rule sections in Part 15, before marketing can begin.
- 3) The design and operation of the equipment shall comply with the conditions stipulated in your request for a waiver, *i.e.*, users will be required to maintain a log of operations, the equipment will contain a "dead man's handle" which must be physically depressed to activate the transmitter, and the equipment will contain a proximity sensor to ensure that the transmitter shuts off if the antenna is moved off of the surface being investigated.
- 4) In addition to the standard labelling required under Part 15, the product shall be labelled with the following statement: "This equipment is authorized under a waiver issued by the FCC. If it is determined that the operation of this equipment has caused harmful interference to other radio operations, the operator shall immediately contact U.S. Radar at [your telephone number]."
- 5) The number of units marketed in the U.S. under this waiver shall not exceed 25 units per calendar year.
- 6) The equipment should meet the appropriate conditions stipulated in the NTIA letter of June 15, 1999.

7) This waiver shall expire within four years from the date of this letter or upon the effective date of a Report and Order addressing this matter, whichever is earlier. However, the cessation of U.S. manufacture, importation and marketing could be required at an earlier date should the Commission find that these radar systems are causing harmful interference to other radio services.

If you have any further questions, please contact John Reed at (202) 418-2455 or at the address on the letterhead (Room 7-A140).

Sincerely,

Dale N. Hatfield
Chief
Office of Engineering and Technology

cc: Vivette Hart
Julius Knapp
Art Wall
Ken Nichols
Greg Czumak
Rich Fabina
Fred Thomas
Karen Rackley
John Reed
Rodney Conway

Chief, TRB

Chief, PRD

JReed/6-11-98