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## FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road Columbia, MD 21046 U.S.A.

Subject: Limited Modular approval request, & Professional Installation

**Applicant: GE MDS LLC.** 

Product: MDS SF9 FCC ID: E5MDS-SF9

## **Professional Installation**

The Transnet-SF9 radio must be professionally (OEM) installed and thus is exempt from the antenna restrictions of FCC Part 15.203.

OEM Integrators must regulate the DC voltage applied to the SF9 module at +3.3 Vdc, with a tolerance of -.0/+.2 Vdc. This can be achieved using a voltage regulator similar to the Texas Instruments PTH0407W, which is a precision DC regulator."

The Transnet-SF9 is not designed for use by the general public, and will be sold through the GE MDS sales force to OEM systems integrators. These companies will either use their professional telecommunications engineering staff to carry out the installation or will subcontract to professional installation firms. Due to the unique technical expertise required in installing and setting up the system, the product is not suitable for distribution to retail channels. In spite of this, GE MDS will warn integrators against selling to retail channels in compliance to FCC regulations.

The Transnet-SF9 radio will be OEM integrated into systems used for fixed, permanent or temporary, outdoor environment. The equipment and their antennas will need professional installers to mount and setup. The output power and cable feed loss for an installation of the Transnet-SF9 radio will be set to meet the applicable EIRP limits by the professional installer during installation. The method of adjusting the output power is described in the integrators instructions for incorporation in their end product manual for use by professionally trained installers.

The Transnet-SF9 radio is sold without an antenna and the customer and/or installation engineer chooses from commercially available antennas in the approved antenna scope. The professional installation engineer is responsible to install only those commercially available antenna(s) (or similar) as listed in the filing. From time to time, GE MDS may sell a commercially available antenna as listed in the filing along with the

Transnet-SF9 radio upon customer request and the instruction remind the integrator that only antenna(s) covered in the filing are to be used with the device.

GE MDS has also included detailed instructions on how to determine the maximum output power based on EIRP limits for all professional installers to follow.

## GE MDS LLC is also requesting that FCC ID E5MDS-SF9 is granted the LMA Limited Modular Approval.

None of MDS's products are for sale to the general public, and are for Industrial applications only, examples, SCADA applications, traffic control, flow rate applications. Thus MDS has a trained staff of technical personnel that work with our industrial customers to ensure "professional installation" is achieved. In all cases the FCC EIRP limits are maintained.

When the Limited Modular approval is granted, MDS will perform training on it's staff, inform them of the "Limited Modular Approval" requirements, and list the technical differences between "Modular and LMA", to ensure it's staff keep the installations in compliance.

All the FCC module testing was performed with antennas that we currently are going to offer for professional installation of this product. The antenna and cable interfaces, are a NON standard "UMC" connectors, and the cable interconnects do fulfill the FCC's Modular requirements. All the antennas that will be used with the Professional installation grant, will be installed by trained/qualified personnel to ensure the strictest compliance with FCC rules.

All supporting manuals and sales literature reflect the regulatory issues. The following text will be placed in the SF9 installation and user manual, and is being "requested" on the FCC grant.

We support this wording on the actual FCC grant and will follow these restrictions

"Power listed is conducted. The module may only be installed in professionally installed hosts systems containing the appropriate voltage regulation circuitry and marketed by the OEM detailed in the filing. Marketing to the general public is prohibited. The antenna installation and operating configurations of this transmitter, including antenna gain and cable loss must be in accordance with configurations described in this filing. The antennas used for this transmitter must be installed to provide a separation distance of at least 23 cm from all persons and must not be colocated or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi- transmitter product procedures. End -users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

If you have any queries, please do not hesitate to contact me at 585 242-8440: Yours truly,

Signed: Mennis McCarthy ....... Name: Dennis McCarthy ......

**Dennis W McCarthy**Agency Compliance Engineer
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