

Exhibit 1

This application requests special temporary authority under Part 5 of the Commission's Rules to conduct testing of new location and monitoring technology ("LMS") being developed by Matrics, Inc., for use in an industrial setting. The experiment will evaluate the design of antennas, tags, and tag readers to be used in determining the precise location of fork-lift style trucks designed with front-end clamp loaders used in the loading of large rolls of paper. The LMS reader antennas will be mounted on the front of the clamp trucks within the jaws of the clamp and will be used to read tags using modulated backscatter. The reader antenna is highly directional and will be used only when the truck has been positioned in front of a large roll of paper. The bulk of the radiated energy will be absorbed by the roll of paper. The other application will occur when antennas are positioned to determine the location of the trays that carry a particular roll of paper on a conveyor system as the roll of paper is moved through the mill. In this situation, too, the antennas are to be positioned so that the energy is directed into the paper.

The following information is provided in support of this request:

1. **Applicant:**

Matrics, Inc.
8850 Stanford Blvd.
Suite 3000
Columbia, MD 21045
410-872-0300
443-782-0230 (fax)

Contact: Kevin J. Powell, Senior Director, Product Development

2. **Dates of Operation:** April 7 – October 7, 2003

3. **Place of Operations:**

International Paper
Texarkana Mill
Highway 59 South
FM Road 3129
Domino, TX 75572

Operating Area:

Mobile and temporary fixed within a 1 km radius of 33-15-10 N. Lat.
94-04-15 W. Long.
1927 datum

- 4. **Number of Units:** 8
- 5. **Width of Beam in Degrees at Half-power Point:**

83.6 degrees in the horizontal plane; 98.2 degrees in the vertical plane

- 6. **Orientation in Horizontal Plane:** 0.0 degrees
- 7. **Orientation in Vertical Plane:** 90.0 degrees
- 8. **Transmitter Output Power:** 30 Watts, peak
- 9. **Effective Radiated Power:** 60 Watts max
- 10. **Frequency:** 911.8 MHz
- 11. **Frequency Tolerance:** 2.5 PPM
- 12. **Emission Designator:** 253KF1D
- 13. **RF Exposure Information:**

The 60 watts maximum effective radiated power requested is below the 100 watts limit for the exclusion from routine environmental evaluation for experimental applications. The final design of the equipment is expected to be at least three dB lower in ERP, but for experimental purposes 60 watts is requested in order to determine the functionality of the system over a range of powers that will bracket the power level targeted for the final design.

As noted above, this application is to secure authority to evaluate equipment under development for operation in the non-multilateration Location and Monitoring Service. The equipment to be operated will be installed on large "clamp truck loaders" capable of picking up rolls of paper that weigh up to five tons. These loaders use the truck body of large fork-lift vehicles that have been equipped with giant clamps in place of the traditional fork prongs. Patch antennas will be placed on the ends of the clamp arms and in the apex of the clamp. These antennas are designed to work most efficiently when radiated into a dielectric consisting of paper rather than air. Thus, the system is designed

so that the bulk of its radiated energy will be absorbed by the roll of paper. Accordingly, each antenna will direct its radiation into the roll of paper as the goal of the operation is to determine the precise location of the clamp truck loader with respect to a particular roll of paper. A tag will be within the center of the roll of paper. If a roll of paper is not within the jaws of the clamp, the transmitter will power down by several dB in order to avoid creating a high SWR condition. Moreover, the placement of the antennas on the clamp affixed to the front end of the clamp truck loader will ensure that personnel are kept at least two meters from the radiating element of the antenna as it would be potentially hazardous for personnel to be close to the roll of paper while it is held by the jaws of the clamp. In addition, antennas for the same type of reader will be positioned near a conveyor that transports trays carrying paper rolls through the mill. In this application, the antennas will also be placed so that they are within inches of the paper roll and the bulk of the energy will be directed into the paper. Note, too, that the calculated power radiated into free space even when the system is radiating a maximum of 60 watts ERP into the paper roll will be less than 1 Watt ERP because of the absorption of the RF energy by the paper roll.