EXHIBIT — RADIOFREQUENCY EXPOSURE EVALUATION

Supporting FCC Form 442

Applicant	KMB Telematics Inc.
FRN	0030628945
Equipment	KMB Traverse 60™, P/N SX35K
Frequency	24.20 GHz
Date	August 6, 2026

1. Summary

This exhibit evaluates the proposed operation against the maximum permissible exposure limits of 47 C.F.R. § 1.1310 and establishes the access controls by which compliance is maintained. The operation is not categorically exempt from evaluation and has accordingly been evaluated in full.

At the requested envelope, the general-population exposure boundary lies at approximately 31.7 m on boresight and the occupational boundary at approximately 14.2 m. Applicant will maintain a controlled perimeter of not less than 40 m radius during full-power operation at elevation angles below 10°, within which the general public is excluded and no personnel are present while the transmitter is energized. During operation at elevation angles of 10° or greater the main beam clears occupied areas, and irrespective of mode or angle a 10 m personnel standoff applies whenever the transmitter is energized. Ground-referenced calibration is conducted at reduced power, for which the general-population boundary lies at approximately 3.2 m.

2. Parameters and Applicable Limits

Parameter	Value
Frequency	24.20 GHz
Transmitter power at antenna port	100 W
Antenna gain	31 dBi
EIRP	125.9 kW (81 dBm, 51.0 dBW)
Antenna	Directional, 31 dBi. Type, aperture, and beamwidths in the Confidential Technical Annex
Duty cycle	Up to continuous
Antenna centerline height	2–3 m above ground
Elevation sector	0° to +45°
Reduced-power mode	1 W at antenna port (61 dBm EIRP)

At 24.20 GHz the limits of 47 C.F.R. § 1.1310 are 1.0 mW/cm² (10 W/m²) for general population / uncontrolled exposure, averaged over 30 minutes, and 5.0 mW/cm² (50 W/m²) for occupational /

controlled exposure, averaged over 6 minutes. Because the emission can be continuous, no reduction for duty cycle is taken and the instantaneous and time-averaged power densities are treated as equal.

3. Exemption Analysis

Applicant has considered whether the operation qualifies for exemption from routine evaluation under 47 C.F.R. § 1.1307(b). It does not. The radiated power and the distances at which the exposure limits are reached both exceed the thresholds at which exemption is available at this frequency. A full evaluation is therefore presented below. Because that evaluation demonstrates that exposure limits are met in all areas accessible to persons — through the access controls of Section 6 — the operation does not cause human exposure in excess of the limits, no Environmental Assessment is required under § 1.1307(b), and Applicant answers Question 9 of Form 442 in the negative.

4. Field Region

The applicable calculation method depends on whether the distances of interest lie in the near field, the transition region, or the far field. For an aperture of maximum dimension D at wavelength λ:

Quantity	Value
Wavelength at 24.20 GHz	12.4 mm
Maximum aperture dimension D	See Confidential Technical Annex
Reactive near-field extent, $D^2/4\lambda$	0.73 m
Far-field boundary, $2D^2/\lambda$	5.8 m

Both exposure boundaries computed in Section 5 lie well beyond the far-field boundary of 5.8 m. The inverse-square relationship is therefore valid throughout the region of interest, and near-field aperture methods are not required. Within 5.8 m of the antenna the power density is higher than the far-field expression predicts; that region lies entirely within the controlled perimeter established in Section 6, and access to it is prohibited during transmission.

5. Exposure Boundaries

On the antenna boresight, power density in the far field is $S = EIRP / 4\pi R^2$. Solving for the distance at which S equals each applicable limit:

Operating mode	EIRP	General population (1 mW/cm²)	Occupational (5 mW/cm²)
Full power (100 W)	125.9 kW	31.7 m	14.2 m
Reduced power (1 W)	1.26 kW	3.2 m	1.4 m

These distances apply on boresight. Off the main beam the power density falls with the antenna pattern; at 20° off boresight the pattern provides discrimination of not less than 40 dB (pattern data in the Confidential Technical Annex), reducing the corresponding distance by a factor of 100 in power terms.

5.1 Treatment of ground reflection

The reflection allowance of OET Bulletin 65, under which power density may be increased by a factor of up to 2.56 where a ground-reflected ray adds in phase with the direct ray, has not been applied. That allowance presupposes that the antenna illuminates the reflection point serving the receptor. It does not do so here.

At an antenna centerline of 3 m and 0° elevation, the lower edge of the main beam does not intersect the ground plane until approximately 57 m from the antenna — beyond the general-population boundary of 31.7 m. Energy reaching any nearer reflection point does so through sidelobes substantially attenuated relative to boresight (beam geometry and sidelobe levels are given in the Confidential Technical Annex), and the reflected contribution at the boundary is correspondingly negligible. Applicant will confirm this geometry at each site and will apply the reflection allowance should site conditions, such as a reflective surface elevated above the local ground plane, make it applicable.

6. Access Control

6.1 Controlled perimeter

During full-power operation at any elevation angle below 10°, Applicant will establish and maintain a controlled perimeter of not less than 40 m radius about the antenna, providing approximately 8 m of margin over the calculated general-population boundary of 31.7 m. The margin accommodates pointing tolerance, azimuth slewing during operation, and uncertainty in the realized antenna gain. The 10° threshold is set geometrically: at the worst-case antenna centerline of 2 m, the lower edge of the main beam then rises at not less than 7.5° above the horizontal, passing approximately 3.3 m above ground at the 10 m standoff distance of Section 6.2 and approximately 6 m above ground at the 31.7 m boresight boundary, with clearance increasing at greater angles. Below 10° that clearance is not assured across the 2–3 m centerline range and possible terrain variation, and the perimeter accordingly applies.

Because azimuth is unrestricted at Sites 2 and 3, and restricted only by the keep-out sector at Site 1, the perimeter is a full circle rather than a sector, enclosing approximately 5,030 m². Site selection accounts for this requirement.

The perimeter will be physically delineated, posted with radiofrequency hazard signage conforming to ANSI C95.2, and closed to the general public throughout.

6.2 Personnel

No personnel will be present within the controlled perimeter while the transmitter is energized at full power below 10° elevation. Reference targets are positioned and all personnel withdrawn beyond the perimeter before transmission commences. The occupational boundary of 14.2 m is accordingly not approached in normal operation. It is stated here to establish the margin available should brief entry

become necessary under the transmitter control procedures of Section 6.4. Irrespective of elevation angle or power mode, no person will approach within 10 m of the antenna while the transmitter is energized. At the simulated first-sidelobe level of −18 dB, the general-population boundary through near-in sidelobes is approximately 4 m; the 10 m standoff bounds that exposure with margin for pattern uncertainty and encloses the reactive near-field region.

Personnel operating the station will be instructed in the applicable exposure limits, the extent of the boundaries computed in Section 5, and the perimeter procedures described here.

6.3 Elevated-angle operation

During operation at elevation angles of 10° or greater — the majority of full-power operating time — the main beam clears occupied areas, with clearance increasing with angle: at the 10° minimum the lower beam edge passes approximately 6 m above ground at the boresight exposure boundary, and at the 45° upper limit the beam centerline exceeds 30 m in height at a ground distance of 30 m. Exposure at ground level in this mode arises only through sidelobes and is bounded by the standoff of Section 6.2.

6.4 Transmitter control

Consistent with 47 C.F.R. § 5.107, the transmitter is under the continuous control of qualified personnel at all times during operation and can be de-energized immediately. A designated point of contact with authority to terminate transmissions is available at all times during operation and is identified in the narrative statement.

7. Reduced-Power Calibration Mode

Boresight alignment, angular calibration against surveyed reference targets, and terrain clutter characterization require the main beam to be directed at or near 0° elevation. These measurements are conducted at the reduced power of 1 W stated in Section 2, for which the general-population boundary lies at approximately 3.2 m and the occupational boundary at approximately 1.4 m.

Reduced power is sufficient for these measurements because the reference targets present a radar cross section far larger than the airborne targets the sensor is designed to detect, at ranges far shorter than its detection envelope. Operating at full power against a near-range reference target would additionally risk receiver saturation and a consequent bias in the angular calibration. The reduced-power mode is therefore adopted for measurement quality as well as for exposure control. The controlled perimeter is not required in this mode; the standoff of Section 6.2 applies.

8. Verification

Applicant will confirm the following before commencing full-power operation:

1. Realized antenna gain and pattern by measurement, the values in Section 2 being taken from manufacturer simulated data.
2. Realized power at the antenna port, the 100 W figure being the requested envelope rather than a measured value.

3. Power density at the perimeter by survey instrument, at each site, before unattended or extended operation.

Should measurement indicate a boundary beyond 40 m, Applicant will enlarge the perimeter accordingly or reduce power.

Applicant certifies that the foregoing evaluation is accurate to the best of its knowledge and belief, and that operation will be conducted in accordance with the access controls described herein.