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Federal Communications Commission
Authorization and Evaluation Division

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Subject: Compliance to Permissive Change Policy for Functional Variants Regarding Application for FCC ID: 2ALEPT0007705

The SEAL with Clip, SEAL with no Clip, SEAL-Ex with clip, and SEAL-Ex with no clip are all LoRa sensors for IoT applications. Each sensor variant can support multiple RF regions, including North America. All four variants share the same printed circuit board. The 'clip' and 'non-clip' variants are functional variants with their only difference being that the 'clip' variants have mechanical enclosure support for safety harness detection on the front side of the enclosure, while the 'no clip' variants do not. The SEAL (not ATEX certified) and SEAL-Ex (ATEX certified) are variants with the following PCBA differences;

1. SEAL is powered by three (3) AA batteries while SEAL-Ex is powered by two (2) AA LID batteries
2. SEAL has a slightly higher current sense resistor for system current measurement compared to SEAL-Ex
3. SEAL has a ferrite bead populated while SEAL-Ex does not.
4. Both SEAL and SEAL-Ex have input power fuses from different vendors populated on their PCBAs.

Otherwise, all four variants are not different in RF circuitry.

The functional variants are compliant to the requirements outlined in Section III of KDB Publication 178919 D01 (Permissive Change Policy) to be authorized under one FCC ID. Specifics for the compliance to each subpart are described below.

Section III Part A: Each variant is considered electrically equivalent as per the permitted changes described in § 2.1043(a).

Section III Part B: The same transmitters are populated on each variant.

Section III Part C: There are no changes in the integral active hardware components between functional variants that would otherwise result in different radio parameters or cause the device to be non-electrically identical.

Section III Part D: There are no substitutions of non-electrically identical parts required between variants.

Section III Part E: There are no changes in transmitter amplifiers between variants.

Section III Part F: There are changes to minor circuitry for non-transmitter portions, the specifics of which are depopulated components related to the excluded sensing functions and their interfacing circuitry. The variant acting as the "worst case" from an emissions perspective was tested, namely, the SEAL with clip (T0008769) model.

Sincerely,

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