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American Certification Body, Inc.
6731 Whittier Avenue
Suite C110
McLean, VA 22101

Subject: Request for FCC and IC Approval of Structure Monitor along side the HIT-NOT® Area Monitor

Frederick Energy Products is submitting an Application approval of the HIT-NOT® Structure Monitor along side the HIT-NOT® Area Monitor. We request that the FCC ID and ISED ID be the same for both devices. The basis of this request is that the design of the two devices are essentially the same and the significant operations are the same. The attached addendum contains a technical comparison of the two devices.

PMN	Structure Monitor	Area Monitor
Model No.	DDAC-SM	DDAC-AMDC
HVIN	DDAC-SM	DDAC-AMDC
HVIN for iWarehouse	1323260	1323261
FCC ID	QUI-DDAC-AM-SM	
ISED ID	11625A-DDACAMSM	

Respectively,

Harold Dean Estill
Consultant (FEP Retired)

Attachment: 1

Technical Comparison of Area Monitor and Structure Monitor

Item Name	Area Monitor	Structure Monitor
Model #	DDAC-AMDC	HN-SM
FCC ID #	QUI-DDAC-AM-SM	QUI-DDAC-AM-SM
IC #	11625A-DDACAMSM	11625A-DDACAMSM
Operational Description	<p>The Area Monitor (AM) mounts at a fixed location in a facility to detect moving vehicles, such as lift trucks, and warn pedestrians that the truck is approaching. The AM initiates warnings to peripheral warning devices (e.g., horn, lights) via discrete signals transmitted by wires between the AM and the warning devices. The warnings are initiated when the AM detects that the magnetic fields emitted by HIT-NOT® Magnetic Field Generators (MFGs) mounted on the truck, exceed a prescribed level. The AM also transmits 916.48 MHz signals to the MFG for the purpose of validating that the sensed-magnetic field is a valid field from a MFG. AM warnings are not sent to the MFG to provide an alert to the truck operator.</p>	<p>The Structure Monitor (SM) mounts at fixed location in a facility to detect moving vehicles approaching the structure on which the SM is mounted and provide a warning to the truck operator. The warnings are initiated when the SM detects that the magnetic fields emitted by HIT-NOT® Magnetic Field Generators (MFGs) exceed a prescribed level. The SM transmits 916.48 MHz signals to the MFG for the purpose of validating that the sensed magnetic field is a valid field from a MFG and also to send a signal to the MFG to provide a warning to the truck operator.</p>
Magnetic Field Generation	none	none
Magnetic Field Detection	Detects 73 kHz pulsed magnetic fields from HIT-NOT® Magnetic Field Generators (MFGs).	Detects 73 kHz pulsed magnetic fields from HIT-NOT® Magnetic Field Generators (MFGs).
RF Receiver	none	None
RF Transmitter	916.48MHz LINX Technologies model TXM-916-ES Transmitter installed on the integrated printed circuit board.	916.48MHz LINX Technologies model TXM-916-ES Transmitter installed on the integrated printed circuit board.
RF Transmitter Timing	<p>RF transmissions occur as response “echos” to a MFG when the detected MFG magnetic field pulse magnitude exceeds a prescribed level. After detection of the initial MFG pulse, a 916.48 MHz “echo” is sent to the MFG. The MFG immediately generates a two other quick pulses which the AM detects and verifies a valid MFG magnetic field. In this process the AM sends an “echo” after the second MFG pulse but does not transmit an echo” after the third pulse. After confirmation of a valid magnetic field, the AM sends single “echo” responses after each MFG magnetic field pulse. MFG pulses are approximately 0.002 sec pulses that occur randomly and are present approximately 3 % of the time.</p>	<p>RF transmissions occur as response “echos” to a MFG when the detected MFG magnetic field pulse magnitude exceeds a prescribed level. After detection of the initial MFG pulse, a 916.48 MHz “echo” is sent to the MFG. The MFG immediately generates a two other quick pulses which the SM detects and verifies a valid MFG magnetic field. In this process the SM sends “echo” after both the second MFG and third pulses. The third “echo” is interpreted by the MFG as a signal to create an alert for the truck operator. After confirmation of a valid magnetic field, the SM sends single “echo” responses after each MFG magnetic field pulse. MFG pulses are approximately 0.002 sec pulses that occur randomly and are present approximately 3 % of the time.</p>

Transmitter Power	0.001 Watts (typical)	0.001 Watts (typical)
Antenna	Linx ANT-916-SP	Linx ANT-916-SP
Input Power	12 VDC from a Wall Wart Power Converter connected to a 110 – 240 VAC power source	12 VDC from a Wall Wart Power Converter connected to a 110 – 240 VAC power source. Alternatively, a 12 VDC battery charge by solar cell can be used.
Board Component Level Hardware/Electrical	Same	Same
Assembly Level Hardware/Electrical	Cable with optional outputs, accessible inside mounting base. Power cable with connector.	No Output Cable – outputs not connected. Power cable with connector.