February 19, 2018

Re: Electronic Monitoring System for Rodents
and Digital Documentation of Activity

To Whom It May Concern:

VM Products and IoT Box Systems have worked together to develop two electronic monitoring systems(EMS). VM Now, an integrated rodent monitoring bait station with electronic monitoring utilizing VM Products knowledge of rodent equipment and IoT Box Systems revolutionary sensor system. The EZ Square is the second of the devices. It is a stand-alone Wi-Fi snap trap system which incorporates a communication device, magnet, and reed switch.

Through IoT Box Systems backend software, VM Now and EZ Square has the capability of tracking and trending data and transforming it into meaningful and actionable information.

An EMS provides valuable tools to assist the pest control technician and plant management in their IPM efforts and audit preparation. Electronic data collection can signal the signs of a potential pest problem before it arises, enabling proactive action. With this new information, pest management professionals will have the ability to use their in-depth knowledge of pest management, the facility and incorporate new and improved service protocols for the safety net needed in these structurers under the FSMA regulations.

VM Now and EZ Square were built for audit standards and designed to encompass the five (5) key components of the FSMA regulations.

The features below can be accessed via web portal or pushed by use of a native App for an Android or IOS (iPhone, iPad, etc.).

- Battery strength is shown on each unit;
- Time-stamp decoding;
- Quantity and measurement record;
- Keep alive alerts (automatic daily systems check);
- Location filed report;
- Report distribution;
- Verification signature;
- Report analysis;
- Optional Tamper cable can be used to identify the station, if moved.
- Proof of service;
- RSS signal strength; and
- Secure – Cloud communication is encrypted by SSL.

What system is used to report accurate information?

VM Now utilizes proven, reliable technology with the use of Zigbee Pro Mesh Network, a self-configuring network providing accurate and reliable information. Zigbee is used by leading companies worldwide, i.e., Phillips, GE, Bosch, Comcast and LG. Zigbee and the account's own local network coexist well together without interferences. The "Mesh" network topology enables longer distance and reliability of the signal in an industrial harsh environment.

Will I have an issue with connectivity?

VM Now utilizes SIM card technology as opposed to Wi-Fi because cellular is everywhere. Wi-Fi reception is within a Wi-Fi hotspot, which varies from approximately fifty feet to a couple of hundred feet from the transmitter (access point needed). There is no additional equipment with cellular just a modem and being wide area network (WANs) it is always on, making deployment easier and faster.

Can the technician access information from a smartphone?

VM Now functions independently as a native App which can be used on Android/iOS operated smartphones. No dedicated terminal is needed. The App can work offline and transmit the data immediately when connected to the Cloud without losing any data.

How do I validate that the station is functioning properly?

One likely concern of auditors is the possibility for station malfunction. VM Now and EZ Square's EMS includes an automatic daily system check. When the system does not see or recognize a station, it creates an action item for the pest management professional to check the station and correct the issue.

How can I verify that the technician has performed service checks on each station?

Confirmation of service of stations is easily confirmed with VM Now's proof of service check button located on the station. Upon servicing of a station, the pest management professional physically activates a button producing a reliable proof-of-service that VM Now's station is alive, working and that the station has been serviced.

With EZ Square, you simply set the trap and press the button located on the communication device. You will then receive a SMS message stating "trap is ready".

Can I detect that a station has been tampered with or moved?

VM Now's tamper cable (optional item) gives the ability to know the station is in the appropriate location. Once installed in any location, the tamper cable is screwed to the wall and connected to the checkpoint. If the station is moved and the cable becomes unplugged from the checkpoint, the system produces a message so that corrective action can be taken.

How do I know the information is securely stored?

All the collected data is ***securely stored*** and accessible through the Cloud. Cloud communication is encrypted by SSL and is the "gold-standard" for web encryption which is used by eBay, Gmail and most major banks worldwide. In addition, the ZigBee communication is encrypted by AES, the same method used for new Wi-Fi devices implementing WPA2-PSK.

EMS and Electronic Documents as it Pertains to Written Guidelines and Rules

The current AIB Consolidated Standards for Inspection-Prerequisite & Food Safety Programs, Integrated Pest Management Standard, Section 4.11.1.6, states that

> Facilities in countries that prohibit the use of mechanical traps may consider the use of alternative devices on a case-by-case basis. These devices may include:
> - Gassing (e.g., CO2) traps
> - Live catch traps
> - See-saw tubes
> - Electrocution traps
> - Extended trigger traps that send alert e-mails or text messages

In June of 2016, the 2017 Prerequisite and Food Safety Programs Standard was released and was implemented for all inspections after January 1, 2017. At the time of this release, AIB issued a document entitled "Change Document to Accompany the 2017 AIB International Consolidated Standards for Inspection". The purpose of the Change Document was to highlight the changes, identify additional criteria and changes to content, and outline expectations during an inspection.

> Section 4.11.1.4 states the following:
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> 4.11.1.4 Critical – Interior monitoring devices are appropriately positioned, cleaned, and inspected at least weekly, or as otherwise defined in the IPM Program based on the detailed facility assessment, if the facility can demonstrate the consistent performance of the equipment and effectiveness of the IPM Program.
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> - *Explanation of the change:* Former requirement 4.12.1.4. Due to new technology devices that do not require very frequent inspections and other reasons, the facility may choose a frequency of inspections other than weekly. The facility may choose less frequent inspections based on (1) their assessment, (2) the absence of pest sightings, and (3) a demonstration of the consistent performance of monitoring equipment and efficiency of the IPM Program.

- *Guidance on evaluation of criteria*: Food Safety Professionals will check the frequency of internal monitoring device inspections, service records, pest-sighting logs, the absence of internal rodent activity, and trend reports to assess effectiveness of the program. Effectiveness includes timely removal of rodents to prevent attraction of secondary pests, mechanically functioning devices, and cleanliness of devices to prevent attraction for insects.

Additionally, in NPMA's 2016 Pest Management Standards for Food Processing & Handling Facilities, it includes a section addressing the use of remote monitoring technology. The association views this technology as a viable addition to a sound science-based IPM strategy.

In section 2.7, Remote Electronic Monitoring Technology it states:

> Remote electronic monitoring technology for pest management devices provide an opportunity to use advancements in technology to improve the overall efficiency and effectiveness of pest management activities. As the technology evolves, science based reviews of the system confirm its value and customer acceptance expands; the devices should become an accepted tool. The structural pest management industry embraces proven advances in technology providing more effective and efficient IPM systems to meet our customer needs.
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> Remote electronic monitoring devices will be able to signal an event notification to the pest management provider and/or client. This type of information flow, if supported by accurate data, may enable pest management companies to redirect their efforts to other pest management actions. It is our belief that as the pest management industry gains more experience with this technology and the equipment is refined; it will permit greater flexibility in our ability to focus on the special pest management needs of a particular site. Pest management companies will need to determine on a case by case basis how often these devices need to be manually checked to maintain their functionality as part of the food safety program.

Both the VM Now and EZ Square provide the tools to be audit ready. These systems produce a clear understanding of the real-time data in which it can create factual reports, dynamic site maps, interactive dashboard which depicts collected data, send alerts for events/situations requiring immediate attention, visualization graphs, meters and colored gauges. The information is easy to read and located in one site, enabling the facility to be audit ready on demand.

For further information about exact details, examples and documentation, please contact Dwright@vmproducts.com.