Noisy Environments & Effective Mass Notification

Is it possible to have effective mass notification, emergency instructions using pre-recorded or live voice in a high noise environment? The answer depends on the type of system you have implemented.

A good mass notification or emergency warning system (MNS/EWS) must have the capability to be tailored not only for a specific organization but also for specific operating environments.

"They'll never hear it," "It's way too noisy in here for that to work," should not be drivers to making purchasing decisions and opting for the minimum. Risk Management Personnel need to consider that a MNS/EWS is purchased to minimize the risk to all of the corporations assets, be it machines, buildings or people. In the recent past, we have seen examples of the use of basic standard recorded warning messages resulting in larger tragedy. For one, because they gave the wrong set of directions or create the wrong reaction for that specific scenario and secondly because the instructions were not clear or discernable. The design of MNS/EWS needs to be planned in as much detail as one would use to design an airplane or skyscraper. Each emergency has its own unique array of actions and reactions, which need to be clearly understood and evaluated.

As part of the evaluation, ambient noise plays a large part. Following this four-step process can be the beginning of making your MNS/EWS most effective:

- Validate the noise assertion. How noisy is it? Is it just loud or is it really a jet engine testing area? Performing an ambient sound test is important, however, a simple sound test using a level setting bullhorn or other apparatus to see whether people can understand verbal instructions over the normal noise in an area can also prove to be very effective.

- Examine the type of noise. Is it constant or intermittent? Consider a process plant where everyone needs hearing protection. Understanding the sequence of events and designing the annunciation patterns around the intermittent noise allows for very successful transmission of verbal and visual instructions.

- Reduce the noise in an emergency. With proper training, personnel learn that when they hear an alarm they stop their noise-producing activities and remove their hearing protection. Grinding and cutting work using compressed air tools is just one example of very noisy operating environments. At first, employees do not need to be able to hear specific emergency instructions over that noise. They simply need to be able identify that an alarm / direction is sounding which would cause them to stop using their noisy tools and then receive the emergency instructions. Another way to reduce noise is to physically or procedurally link an alarm-initiating device to a selective power interruption system whereby the activation of an alarm safely shuts down the noise making equipment.

- Visual alerts as effective as sound. Utilization of single or multi colored strobes can be as or even more effective to identify an emergency situation. The different colors will give notice of the type of specific emergency and action required. Just like with auditory alerts, the visual approach must only get the person's attention as a precursor to receiving the auditory communication. Further still, display panels effectively communicate not just the alert but also specific emergency instructions. Best is to incorporate visual alert and communication devices with auditory measures to achieve redundancy.

With proper analysis of an operating environment, tailored equipment configuration, correct installation and personnel training, you will find that personnel in high noise areas can receive the same level of protection as those in quieter surroundings. Contact your local Industronic representative or our Corporate Headquarters @ 1-866-986- PAGA (7242) for an effective MNS/EWS solution that is right for your organization.

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