

# EMERGING WORKPLACE HAZARDS: **Creating Adaptable and Innovative Safety and Health Training**

May 2–4, 2023 / Indianapolis, Indiana



## WORKSHOP SESSION SUMMARY

### POST-CONFERENCE PROCEEDINGS

#### 1. Session Title and Presenter's Contact Information:

Workshop number and title: 58 and 70: Escaping the Monotony of Training Using Game-Based Learning

Presenter (s) Name: Steve Maiuri, Andy Rodriguez, Britt Arnott, Jordan Huck, and Kara French

Presenter Organization: HAMMER

Presenter Email: kara\_j\_french@rl.gov

#### 2. Workshop Summary:

HAMMER staff and worker trainers from the field collaborate to develop fresh, innovative ways to train students on the regulatory objectives each year. This year, to fully engage the students and increase knowledge retention, the team developed an "escape room" for the Respiratory Protection class. An escape room is a game in which a team of players discover clues, solve puzzles, and accomplish tasks in one or more rooms to accomplish a specific goal in a limited amount of time. HAMMER's respiratory escape room reinforces learning objectives while reproducing challenges the students might face on a day-to-day basis in the field while wearing respiratory protection equipment.

#### 3. Methods:

The main objective for the presentation was to share that multiple objectives can be covered within an escape room activity, while using interactive, engaging training along with small group discussions. During these sessions participants learned how to inspect and assemble the 3M Versaflo Powered Air Purifying Respirator (PAPR) along with limitations, assigned protection factors, OSHA, and manufacturer requirements. The activity was set up to have four groups of six. Each table was color coded and the participants stayed with their color-coded path throughout the escape room. Participants started with a question and directions to find lock box one, they had to decode the letters of their answer into numbers by using the keypad on their phones to unlock lock box one. At lock box one was a 3M Versaflo that wasn't assembled, inside lock box one were directions on how to partially inspect and assemble the 3M Versaflo, lock box one contained five instruction cards directing the sixth participant to inspect and assemble the 3M Versaflo per their groups directions that they would read from the 5 cards. The escape room continued with questions and clues taking the participants to posters, manufacturer letters, completing the inspection and assembly of the 3M Versaflo then ending their journey back to their original table that had the final lock box. The final lock box contained a puzzle, blacklight, and directions participants assembled the puzzle then used the blacklight to locate their final directions, which congratulated them on a job well done. Each group had an assigned instructor throughout the

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activity, to capture any questions that arise and to verify that participants stay on track with learning objectives.

Advantages to this type of activity is that it encourages small groups to work together, puts equipment and resources in their hands, while they apply what they are learning. Disadvantage to this type of activity is, location where you conduct this training, as well as the time you have to prepare will limit the extent of what you can set up for the students. But as we demonstrated with this activity it can be taken mobile.

#### 4. Main Points/Key Points Raised from Participants:

Participant Responses:

- Discussions on how to incorporate their objectives into an escape room
- How we made the escape room portable
- Where we purchased the items for the escape room
- How visuals are incorporated in the field as reminders for the training
- Participants enjoyed the competitive nature of the activity

#### 5. References:

OSHA 1910.134  
3M Versaflo user's manual

#### 6. Workshop Handouts/Resources:

*[can be attached separately]*