**Attachment C**

**Evaluation of an Immersive “VRMine” Mine Rescue Team Contest Simulation Exercise:**

**Briefing Officer Survey**

Evaluation of an Immersive “VRMine” Rescue Team Contest Simulation Exercise:

Do you have any experience in the role of briefing officer in a real mine emergency?

If yes, how many times? When and where?

□ No □ Yes

Do you have any experience in a real mine emergency under apparatus, as an MRT member? □ No □ Yes

If yes, how many times? When and where?

Have you ever been called to a real mine emergency to serve on an alternate MRT

(your team did not go underground under apparatus)?

□ No □ Yes

If yes, how many times? When and where?

If yes to any of the above, how well do you think your mine rescue contest experience had prepared you for an actual emergency?

Briefing Officer Survey

Form Approved OMB No. 0920-1154

Exp. Date XX/XX/XXXX

Age:

Gender: □ Male □ Female

How many years of experience do you have…?

As a miner?

On a mine rescue team (MRT)? As briefing officer?

Is briefing officer your usual role?

□ No □ Yes

If not, what is?

How many years of experience do you have…? In your usual role?

In approximately how many mine rescue competitions have you participated, as the briefing officer? In approximately how many mine rescue competitions have you participated, overall?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Not well prepared | | |  | | | | Very well prepared | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|  |  |  |  |  |  |  |  |  |  |

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|  |  |  |
| --- | --- | --- |
| Have you ever experienced a virtual reality (VR) environment before today? | □ No | □ Yes |
| Have you ever experienced VR using a head-mounted display (HMD) before today? | □ No | □ Yes |
| Have you ever participated in multi-player VR activities using HMD? | □ No | □ Yes |
| How often do you use an HMD? |  |  |
| □ Daily □ Weekly □ Monthly □ A few times a year | □ Never |  |
| Have you ever trained for mine rescue in a VR environment before today? | □ No | □ Yes |
| Have you ever trained for mine rescue using VR HMD before today? | □ No | □ Yes |

# In your role as briefing officer in today’s mine rescue simulation, please rate your level of

**agreement with the following statements (e.g., communications and interactions with the exploration team).**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Place an “X” in the appropriate box.** | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
| m) I think that I would like our team to use this kind of VR simulation system more frequently. |  |  |  |  |  |
| n) I found my role in the simulation system to be unnecessarily complex. |  |  |  |  |  |
| o) I thought the simulation system was easy to use. |  |  |  |  |  |
| p) I think our team would need the support of a technical person to be able to use this kind of simulation system. |  |  |  |  |  |
| q) I found the various functions in this simulation system were well integrated (e.g., it was easy for me to communicate with the team). |  |  |  |  |  |
|  |  |  |  |  |  |
| s) I would imagine that most people would learn to use this system very quickly. |  |  |  |  |  |
| t) I found playing my role within the simulation system to be very awkward. |  |  |  |  |  |
| u) I felt very confident using this simulation system. |  |  |  |  |  |
| v) I needed to learn a lot of things before I could get going with this simulation system. |  |  |  |  |  |
|  |  |  |  |  |  |
| w) Training in a virtual environment like this is a good *substitute* for training in other simulated environments (e.g., fields, physical structures). |  |  |  |  |  |
| x) Training in a virtual environment is a good *supplement* to training in other simulated environments  (e.g., fields, physical structures). |  |  |  |  |  |

**Open-ended questions**

**Likes/Dislikes**

Did you enjoy participating in today’s simulation exercise? □ No □ Yes

If anything, what did you enjoy most about today’s simulation exercise? What did you like least about today’s simulation exercise?

What was the greatest difficulty you had during today’s exercise?

# VR Mine specifics

From the perspective of the Briefing Officer, how might the VR simulation be improved to better reflect a real world mine emergency (e.g., set-up, communication, maps, etc.)?

What features or capabilities would you like to see for the role of briefing officer in future VR simulations? Overall, what changes should we make to improve simulations like this for the purposes of mine rescue training?

# VR training fit

How, if at all, would you like to see VR simulation used in mine rescue training?

What, if any, gaps in mine rescue training do you think VR simulations like this could help to fill? How could VR simulation be used to address these gaps?

Given the opportunity, would you be interested in participating in virtual mine rescue contests (i.e., using VR simulation)

*in addition to* traveling to a physical location to participate in traditional mine rescue competitions? Why or why not?

Given the opportunity would you be interested in participating in virtual mine rescue contests (i.e., using VR simulation)

*instead of* traveling to a physical location to participate in traditional mine rescue competitions? Why or why not?

# Wrap up

Do you have any other comments (positive or negative) or suggestions?