

### Attachment C3 – Mine Escape participants: Post-Simulation Questionnaire

1. For each item below, rate how well your team did in each of the following areas by placing an “X” in the appropriate box.

	Poor	Below Average	Average	Above Average	Excellent
a) overall performance					
b) communicating with the team					
c) being “team players”					
d) coordinating individual team member’s efforts					
e) perceptive of the conditions in the environment					
f) knowing what needed to be done					
g) being decisive yet flexible					
h) being open to input from others					
i) remaining calm and focused					
j) being logical decision makers					

2. Think about the simulation you just completed and place an “X” in the appropriate box.

a) The mental demands were:

Very Low                    Very High

b) The physical demands of the exercise were:

Very Low                    Very High

c) The level of stress I experienced was:

Very Low                    Very High

d) The time pressure I felt was:

Very Low                    Very High

e) The level of frustration I experienced was:

Very Low                    Very High

f) The amount of effort needed to complete the task was:

Very Low                    Very High

g) The level of eye strain I experienced was:

Very Low                    Very High

h) The level of strain I experienced from standing during the simulation was:

Very Low                    Very High

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**3. Answer the following questions about the simulation by placing an “X” in the appropriate box.**

a) How natural did moving through the virtual mine seem?

Not Natural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very Natural
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b) How much did your experience in the virtual simulation seem consistent with your real-world experiences in an actual mine?

Not Consistent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very Consistent
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c) How natural were your interactions with the environment (e.g., opening doors, taking gas readings)?

Not Natural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very Natural
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d) Were you involved in the exercise to the extent that you lost track of time?

No – I did not lose track of time at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes – I completely lost track of time
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e) How responsive was the simulation to actions that you performed with the air mouse?

Not at all responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very responsive
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f) How engaged were you in the virtual reality experience?

Not at all engaged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very engaged
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g) How immersed did you feel in the virtual environment?

Not at all immersed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very immersed
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**4. On a scale from 1 to 10, rate how difficult or easy it was for you, by the end of the simulation, to do the following.**

Place an “X” in the appropriate box.

	Very Difficult								Very Easy	
	1	2	3	4	5	6	7	8	9	10
a) Find your air mouse cursor on the screen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Move the air mouse cursor to a specific spot on the screen (such as a door or fire extinguisher).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Move the air mouse cursor rapidly from one side of the room to the other (i.e., 180 degrees).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Scroll through different tools on the air mouse (e.g., gas monitor, SCSR).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Select a tool using the center wheel on the air mouse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Use a tool with the air mouse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Switch quickly between two different tools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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5. Rate how much you agree or disagree that the words and phrases below describe the simulation you just completed.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
a) Engaging					
b) Chilling/eerie					
c) High replay value (i.e., you'd be interested in trying it again sometime)					
d) Interesting					
e) Flexible (i.e., your team could accomplish the goals the way it wanted to)					

6. Are you able to see stereoscopic 3D images?  Yes  No

7. Rate how much, if at all, you experienced the symptoms below as a result of the VR simulation.

	None	Slight	Moderate	Severe
a) General Discomfort				
b) Eyestrain				
c) Difficulty focusing				
d) Nausea				
e) Dizziness				
f) Stomach Awareness				

8. How often do you get motion sickness in the following situations?

	Never	Once in a while	Sometimes	Frequently	Always
a) Riding in a car on a twisting and turning road					
b) Riding in an airplane experiencing turbulence					
c) Riding amusement park rides					
d) Watching an IMAX movie					

9. How much, if any, motion sickness did you experience during the following events in the VR simulation?

	None	Slight	Moderate	Severe
a) Moving down a long entry in the mine				
b) Periods of stopping and moving suddenly				
c) Turning around quickly				
d) Looking around the mine while moving				
e) Looking into a refuge chamber				

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10. Did you enjoy participating in this VR simulation?  Yes  No