

Summary Report for Individual Task
052-247-1204
Perform Ventilation Procedures for an Urban Search and Rescue Incident
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - The materials contained in this course have been reviewed by the course developers in coordination with the Ft Leonard Wood, MO/MSCOE foreign disclosure authority. This course is releasable to students from all requesting foreign countries without restrictions.

Condition: You are a member of an Urban Search and Rescue (US&R) team and are given a confined space or trench rescue incident that needs to be ventilated. You have all required personal protective equipment (PPE), ventilation equipment, and an accurately calibrated detection and monitoring device. This task should not be trained in MOPP 4.

Standard: Perform ventilation procedures of a confined space or trench by choosing proper ventilation methods, eliminating the hazardous atmospheric conditions and continuously monitoring the atmosphere throughout the operation IAW National Fire Protection Association (NFPA) 1006.

Special Condition: None

Safety Risk: Low

MOPP 4: Never

Task Statements

Cue: None

DANGER
None

WARNING
None

CAUTION
None

Remarks: All required references and technical manuals will be provided by the local US&R Command.

Notes: None

Performance Steps

1. Select the appropriate ventilation method to quickly replace the air in the space.

Note: Fan capability limitations are posted on the fan housing.

2. Ventilate a confined space.

a. Utilize natural ventilation (non-permit entry only).

WARNING

Pure oxygen is not fresh air. Never use 100% pure bottled oxygen for ventilation.

b. Utilize positive pressure ventilation (PPV) without ventilation hoses.

(1) Place the positive pressure ventilation (PPV) fan near the entrance opening (4-6 ft) so that it will create a positive pressure within the space.

Note: Direct fan into point of entry so that cone of air covers opening.

(2) Create an exit opening on the opposite side of the space that is 2-3 times larger than the entry opening.

(3) Start the fan.

c. Utilize positive pressure ventilation (PPV) with hoses.

(1) Place ventilation hose into the confined space opening as close to the victim as possible.



Figure 052-247-1204-1
Ventilate a Confined Space

(2) Place the positive pressure ventilation (PPV) fan near the entrance opening away from toxic and flammable air.

(3) Create an exit opening on the opposite side of the space that is 2-3 times larger than the entry opening.

(4) Start the fan.

d. Utilize negative pressure ventilation.

(1) Select the vent site opening ensuring that it is free from obstructions.

(2) Place the fan in the opening facing outward.

(3) Start the fan.

3. Ventilate a trench.

Note: Ensure the rate of airflow in the trench is sufficient to ventilate it without stirring up dust. This may require intermittent use of the blower or fan.

a. Utilize positive pressure ventilation (PPV).

Note: Positive ventilation may be necessary to clear the trench of airborne contaminants or provide airflow in extremely hot environments to rescuers and victims.

(1) Place the ventilation hose into the trench opening.

(2) Place the positive pressure ventilation (PPV) fan near the entrance of the trench away from toxic and flammable air.



Figure 052-247-1204-2
Ventilate a Trench

(3) Start the fan.

b. Utilize negative pressure ventilation.

(1) Select an intrinsically safe smoke ejector with a flexible duct hose attached.

(2) Position blower (smoke ejector) outside of the trench with the end of the duct lowered into the trench to draw contaminants out and fresh air in.

DANGER

Any time a limit is exceeded no matter what the reason, all personnel shall immediately exit the space and no others shall enter until atmospheric conditions are returned to safe levels. **FAILURE TO COMPLY MAY CAUSE PERMANENT INJURY OR DEATH!**

4. Perform continuous monitoring of the space to ensure ventilation is keeping the air within acceptable limits. (See task 052-247-1203)

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier a GO if all measures are passed (P). Score the Soldier NO-GO if any measure is failed (F). If the Soldier fails a measure, show them how to do it correctly.

Evaluation Preparation: Provide Soldier with all items listed in the condition. Tell Soldier to perform ventilation procedures for an US&R incident.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Selected the appropriate ventilation equipment that quickly replaced the air in the space.			
2. Ventilated a confined space.			
3. Ventilated a trench.			
4. Performed continuous monitoring of the space to ensure ventilation kept the air within acceptable limits. (See task 052-247-1203)			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	29 CFR 1910	Occupational Safety and Health Standards	No	No
	IFSTA	International Fire Service Training Association (IFSTA) Fire Service Search and Rescue, 7th Edition	No	No
	IFSTA - 1st Edition	IFSTA Technical Rescue for Structural Collapse, 1st Edition	No	No
	NFPA 1006	Standard for Rescue Technician Professional Qualifications	Yes	Yes

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
052-247-1203	Conduct Atmospheric Monitoring for an Urban Search and Rescue Incident	052 - Engineer (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-247-1315	Control Hazards of a Confined Space	052 - Engineer (Individual)	Analysis
052-247-1217	Operate a Supplied Air Respirator System	052 - Engineer (Individual)	Reviewed
052-247-1329	Prepare for Entry Into a Confined Space Rescue Operation	052 - Engineer (Individual)	Analysis

Supported Collective Tasks :

Task Number	Title	Proponent	Status
05-3-8012	Perform Trench Rescue Operations	05 - Engineers (Collective)	Approved
05-3-8011	Perform Rope Rescue Operations	05 - Engineers (Collective)	Approved
05-3-8013	Perform Confined Space Rescue Operations	05 - Engineers (Collective)	Approved