

## MINE SEARCH AND RESCUE TEAM

DESCRIPTION	A Mine Search and Rescue (SAR) Team conducts search, rescue, and recovery in underground mine environments, including active, inactive, and abandoned mines.		
RESOURCE CATEGORY	Search and Rescue	RESOURCE KIND	Team
OVERALL FUNCTION	<p>The Mine SAR Team:</p> <ol style="list-style-type: none"> <li>1. Conducts search, rescue, and recovery in active and inactive mines environments, as defined by the U.S. Department of Labor's Mine Safety and Health Administration (MSHA)</li> <li>2. Provides for primary rescue of humans and animals to the nearest location for secondary air or land transport, care, and sheltering</li> <li>3. Provides first aid to include cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED)</li> <li>4. Operates within the Incident Command System (ICS)</li> <li>5. Performs ventilation operations</li> <li>6. Conducts technical rope rescue operations</li> <li>7. Performs small fire extinguishment operations</li> <li>8. Uses ground vehicles, watercraft, and aircraft for support</li> <li>9. Operates in environments with and without infrastructure, including those with compromised access to roadways, utilities, and transportation, or medical facilities; and those with limited availability of shelter, food, and water</li> </ol>	COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> <li>1. Discuss the following items prior to deployment: <ol style="list-style-type: none"> <li>a. Intra-team communications, such as programmable inter-operable communications with Command, General Staff, and other supporting resources</li> <li>b. Presence of contaminated environments and need for related personal protective equipment (PPE), respiratory protection, clothing, and equipment</li> <li>c. Security and force protection needed upon arrival</li> <li>d. Logistics support, such as lodging, transportation, and meals for sustained operations beyond 72 hours</li> </ol> </li> <li>2. This team works up to 12 hours per shift, is self-sustainable for 72 hours (beyond need for security and force protection), and is deployable for up to 14 days</li> <li>3. The requestor should specify additional specialized equipment, such as hardware, software, ropes, survivor evacuation devices</li> <li>4. The requestor should specify the mission location and operational environment, such as land, wilderness, or hazardous materials contamination</li> <li>5. The requestor should specify additional skills needed for deep or rapidly moving water, sumps, or completely water-filled passages</li> <li>6. The requestor should specify the type of animal rescue, such as livestock and equine, companion, avian, non-domestic and exotic animals</li> <li>7. The requestor should acquire additional specialized personnel separately, such as advanced medical, Emergency Medical Technician (EMT), paramedic, and canine SAR specialist</li> <li>8. The requestor should acquire secondary land or air transport of rescues separately</li> <li>9. The requestor should specify or separately acquire additional vehicles, trailers, equipment, or supplies such as fuel</li> <li>10. The requestor should consider the need for additional capabilities or endorsements to address hazards the team may encounter during operations in SAR environments, which may be immediately dangerous to life and health (IDLH), as defined by ASTM International (ASTM) F2890 Standard Guide for Hazard Awareness for Search and Rescue Personnel</li> </ol>



RESOURCE TYPES			TYPE 1	TYPE 2	NO TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Personnel	Per Team	Minimum	7	7	Not Applicable	Not Applicable
			NOTES: Not Specified			
Personnel	Per Team	Management and Oversight	1 - NIMS Type 1 Mine SAR Team Leader	1 - National Incident Management System (NIMS) Type 2 Mine SAR Team Leader	Not Applicable	Not Applicable
			NOTES: Not Specified			
Personnel	Per Team	Operations and Support	6 - NIMS Type 1 Mine SAR Technician	6 - NIMS Type 2 Mine SAR Technician	Not Applicable	Not Applicable
			NOTES: Rapid intervention and logistical support, such as surface operations and communications, may require additional teams.			
Capability	Per Team	Operations	Same as Type 2, PLUS: 1. Conducts search, rescue, and recovery in active underground mine environments 2. Firefighting and explosion operations 3. Bulkhead building and timbering operations 4. Post fire/explosion operations	Conducts search, rescue, and recovery in inactive underground mine environments	Not Applicable	Not Applicable
			NOTES: 1. All teams are capable of working in or around a mine with a NIMS Type 1 Canine Search Team - Land Live 2. The MSHA defines endorsements necessary for specific mine types.			

Superseded



RESOURCE TYPES			TYPE 1	TYPE 2	NO TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Equipment	Per Team Member	PPE	Same as Type 2	Minimum PPE consistent with this resource's capabilities and needs, including: 1. Head protection compatible with cap lamps  2. Gloves 3. Flame protective outerwear 4. Footwear appropriate to the environment	Not Applicable	Not Applicable
			<b>NOTES:</b> 1. American National Standard Institute (ANSI) Z359: Fall Protection Code addresses PPE. 2. Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.146: Permit-Required Confined Spaces addresses confined spaces.			
Equipment	Per Team	Transportation	Same as Type 2	2 - Vehicle	Not Applicable	Not Applicable
			<b>NOTES:</b> Vehicles are for transporting team members and equipment and should be 4 wheel drive as the environment requires.			

Superseded



RESOURCE TYPES			TYPE 1	TYPE 2	NO TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Equipment	Per Team Member	General	Same as Type 2, PLUS: Equipment including: 1. Entry equipment 2. Fire/explosion suppression 3. Bulkhead building and timbering	1. Technical rope rescue equipment 2. Atmospheric monitors for each type of gas expected and any necessary equipment for testing and sustaining operations 3. Particulate masks and respirators 4. Lockout and tag-out kits  5. Personnel accountability system for surface and entry 6. Rapid intervention crew kit 7. Small fire extinguishment 8. Specialized equipment as needed, such as animal rescue, water entry equipment 9. Access, search, rescue, recovery 10. Patient assessment, treatment and evacuation 11. Ground support for air operations 12. Base and spike camp 13. Entry and escape combination or separate breathing apparatuses: a. Breathing apparatus (BA) with at least 4 hour capacity b. Any necessary equipment for testing and sustaining such BA for 8 hours while using it c. Escape breathing device with at least 1 hour (Continued)	Not Applicable	Not Applicable

Superseded



RESOURCE TYPES			TYPE 1	TYPE 2	NO TYPE 3	NO TYPE 4
COMPONENT	METRIC/ MEASURE	CAPABILITY				
Equipment	Per Team Member	General		(Continued) capacity		
NOTES: Not Specified						
Equipment	Per Team Member	Communications	Not Applicable	1. Intra-team portable communications 2. Portable radios with ground to air capability 3. Handheld Global Positioning System (GPS) units 4. Mobile phone and waterproof bag 5. Entry to Surface and Surface to Entry Communications that comply with OSHA 29 CFR 1910.146 6. Handi-mikes or ear/headsets	Not Applicable	Not Applicable
NOTES: 1. Intra-team and inter-team communications should be consistent with National Interoperability Field Operations Guide (NIFOG). 2. Consider alternate forms of communication, such as satellite phones, based on the mission assignment and team needs.						

Superseded

## REFERENCES

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1. FEMA, NIMS 509: Mine Search and Rescue Team Leader
2. FEMA, NIMS 509: Mine Search and Rescue Technician
3. FEMA, NIMS 509: Canine Search Team – Land Live
4. The American Society of Safety Engineers (ASSE), ANSI/ASSE A10.32: Fall Protection Systems for Construction and Demolition Operations, 2012
5. ASSE, ANSI/ASSE A10.16: Safety Requirements for Tunnels, Shafts, and Caissons, 2009
6. ASSE, ANSI/ASSE Z359.1: Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components, 2007
7. ASTM International (ASTM) F2890-12: Standard Guide for Hazard Awareness for Search and Rescue Personnel, 2012
8. U.S. Department of Homeland Security, Office of Emergency Communications (OEC), National Interoperability Field Guide (NIFOG), version 1.5, January 2014
9. Occupational Safety and Health Administration (OSHA), 29 Code of Federal Regulations (CFR) Part 1910.146: Permit-Required Confined Spaces

## NOTES

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Nationally typed resources represent the minimum criteria for the associated component and capability.

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