MSHA MINE EMERGENCY OPERATIONS

MSHA has three mine rescue stations. Each station has different response vehicles. The stations are:

1) Pittsburgh National Headquarters
2) Beckley Mine Rescue Station
3) Price Mine Rescue Station

Pittsburgh National Headquarters

The Seismic Location System

The seismic location system is truck mounted and is capable of detecting and locating the source of seismic vibrations produced by trapped miners. Miners may generate seismic signals by pounding on mine surfaces such as the roof, floor, or ribs. These signals are detected by sensors installed either on the surface or underground. The system is capable of detecting signals at a range of 1500 feet, and can monitor approximately 1/2 square mile over most mines (depending upon terrain). The system is highly mobile, and can be air lifted. The system operates on 480-volts 3-phase that can be supplied by the generators on board the auxiliary truck. A supply trailer is used to carry the associated equipment.

Pittsburgh National Headquarters

Seismic Location Truck

1988 International - L9122: GVW – 28,000; Height – 146”;
Length – 354”; Width – 96”

Operates on: 480V, 60amp

Pittsburgh National Headquarters

Seismic Auxiliary Truck

1988 Chevrolet – L9268: GVW – 26,000; Height – 97”;
Length – 303”; Width – 96”

Equipped with: 30KW Diesel Generator

Pittsburgh National Headquarters

Seismic Supply Trailer

1972 Fruehauf - L8345: GVW – 68,000; Height – 148”;
Length – 496”; Width – 96”

Operates on: 220V, 60amp

Equipped with: 6.5KW Gas Generator

Pittsburgh National Headquarters

TV Probe Truck

The TV probe system is a self-contained system consisting of two complete permissible TV probes. Each probe has remote focus, zoom lens, and remote iris adjustments. The system has dual monitoring consoles, and a video tape capability. The complete system is air transportable and can operate at a depth of 1500 feet. The TV probe operates on 480 volts 3 phase 60 amps. It can also operate with 220 volts 40 amps for demonstration purposes.

Pittsburgh National Headquarters

TV Probe Truck

1990 International – L9255:
GVW – 22,000 ; Height – 98”;
Length – 284”; Width – 95”

Operates on: 480V, 60amp and 220V, 60amp

Equipped with: 6.5KW Gas Generator

Pittsburgh National Headquarters

Mobile Gas Laboratory

The Mobile Gas Laboratory is a fully-functional laboratory that can be deployed to mine fires/explosions. Gas samples can be taken from the mine atmosphere in evacuated bottles, plastic syringes, or FlexFoil bags and analyzed by MSHA personnel on site. Instrument capability includes two bench-top gas chromatographs which can analyze samples for a variety of gas constituents including: methane, ethane, acetylene, oxygen, nitrogen, hydrogen, carbon dioxide, carbon monoxide, ethylene, and argon. The system can process 4-6 gas samples per hour.

Pittsburgh National Headquarters

Gas Analysis Truck

2005 Freightliner – L1996:
GVW – 26,000 ; Height – 144”;
Length – 366”; Width – 96”

Operates on: 480V, 30amp
and 240V, 50amp

Equipped with: Two - 8KW
Diesel Generators

Pittsburgh National Headquarters

Ventilation Monitoring Truck

The ventilation truck is operated by the MSHA Technical Support Ventilation Division which provides expertise in utilizing gas and air flow sampling techniques and interpretation of the results of gas sample analyses. The truck is used at mine sites and carries a variety of instrumentation used for continuous sampling and recording of mine gases, including infra-red and electrochemical analyzers.

Pittsburgh National Headquarters

Ventilation Monitoring Truck

2008 Ford – L9290: GVW – 16,000; Height – 131”;
Length – 292”; Width – 96”

Operates on: 220V, 60amp

Equipped with: Trailer Mounted 15KW Diesel Generator

Pittsburgh National Headquarters

Robotic Response Trailer

The modified ANDROS Wolverine robot has been used by military and swat teams. It has been modified and made permissible. It has four TV cameras and a remote display. It has a continuous display of mine gases from an Industrial Scientific detection instrument. Communication is by fiber optic cable. It currently has a travel distance of 1600 feet.

Pittsburgh National Headquarters

Robotic Response Trailer

Andros Robot

2004 Cargo Pro – L9350: GVW – 7,000; Height – 99”; Length – 191”; Width – 104”

Operates on: 110V, 20amp

Beckley Mine Rescue Station

Command Vehicle

This vehicle is used during mine emergencies. The vehicle is specially equipped for a quick, temporary MSHA on-site headquarters to meet and address the mine emergency. This vehicles is setup with communication equipment, conference facilities, and mobile office equipment.

Beckley Mine Rescue Station

Command Vehicle

1994 Chapparral – L9262: VW – 23,400; Height – 158”; Length – 474”; Width – 102”

Operates on: 220V, 50amp
Equipped with: Two – 7.5KW Diesel Generators

Beckley Mine Rescue Station

MEU TEAM TRUCK

This vehicle is used during mine emergencies to give the MSHA mine rescue team members a place to store and work on emergency equipment. This vehicle is used by the Coal MEU team members which consist of trainers, a team leader and a mine rescue specialist. The team is headed up by a coordinator. This team is highly trained and qualified in the use of specialized equipment such as emergency breathing apparatus, hand-held gas detection equipment and specialized communication equipment.

Beckley Mine Rescue Station

MEU Team Truck

2008 Chevrolet – L9292: GVW – 33,000; Height – 148”; Length – 447”; Width – 100”

Operates on: 220V, 60 amp
Equipped with: 7.58KW Diesel Generator

Beckley Mine Rescue Station

MSHA Rescue Capsule

The capsule consists of a main personnel section that can be attached to hoisting systems, such as a portable cranes, etc. There is a supplies/materials section that can be attached to the bottom of the primary section to provide enhanced flexibility. The personnel section weighs 650 pounds and is 21.5 inches in diameter by 92 inches tall. The supplies/materials section is 37 inches long. The personnel compartment, which is designed to carry one person, contains a vertical sliding access door that is 19 inches wide by 36 inches tall. The internal diameter of each unit is 19 inches. The system is designed to be used in a cased borehole with a minimum diameter of 24 inches.

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Beckley Mine Rescue Station

MSHA Rescue Capsule

Beckley Mine Rescue Station

Search and Rescue Trailer

MSHA is part of the National Response Team for any type of emergency situation. This trailer is equipped to provide temporary housing for a small group of emergency responders. It has heating and air conditioning.

Beckley Mine Rescue Station

Search and Rescue Trailer

1972 Dorsey - L8344

Price Mine Rescue Station

Command Vehicle

This vehicle is used during mine emergencies. The vehicle is specially equipped for a quick, temporary MSHA on-site headquarters to meet and address the mine emergency. This vehicles is setup with communication equipment, conference facilities, and mobile office equipment.

Price Mine Rescue Station

Command Vehicle

1998 Monarch

Operates on: 220 V 50 amp

Price Mine Rescue Station

MEU TEAM TRUCK

This vehicle is used during mine emergencies to give the MSHA mine rescue team members a place to store and work on emergency equipment. This vehicle is used by the Coal MEU team members which consist of trainers, a team leader and a mine rescue specialist. The team is headed up by a coordinator. This team is highly trained and qualified in the use of specialized equipment such as emergency breathing apparatus, hand-held gas detection equipment and specialized communication equipment.

Price Mine Rescue Station

MEU Team Truck

1994 Ford – L9266: VW – 18,700; Height – 156”; Length – 402”; Width – 102”

Operates on: 220V, 50amp