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Revision 2

# WIPP Mine Rescue Program Plan

Cognizant Organization: Emergency Services

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## 1.0 PURPOSE/SCOPE [1]

The purpose of this document is to provide a plan to ensure effective emergency response in the event of an emergency requiring the services of a mine rescue team (MRT). This plan outlines the capabilities of the MRTs to provide search, rescue, and recovery operations when so directed by the Waste Isolation Pilot Plant (WIPP) Facility Shift Manager (FSM). The MRTs are required to follow guidelines set forth by Title 30 *Code of Federal Regulations* (CFR) Part 49, "Mine Rescue Teams," and the U.S. Department of Labor (DOL) metal/nonmetal mine rescue manuals.

This program plan is considered guidance to be followed during mine rescue emergencies, as outlined by the DOL and the Mine Safety and Health Administration (MSHA).

## 2.0 MINE RESCUE TEAMS

The WIPP mine rescue organization consists of two MRTs (Blue and Silver). Each team is equipped with proper equipment stored in the mine rescue room located in the Safety Building (452). This mine rescue station meets the requirements of 30 CFR §49.5(a), (b), and (c).

Each MRT consists of a minimum of six members, including a captain, gas man, map man, first-aid man, cocaptain, and alternate. It is to be understood that any team entering a mine after an explosion or an accident is taking a calculated risk. The team must, however, give each situation careful thought before proceeding and must keep the potential odds in favor of the team at all times.

The fundamental principles of mine rescue are, in order of importance:

- Ensuring the safety of the rescue team(s)
- Endeavoring to rescue, or ensuring the safety and life of, trapped or missing personnel
- Protecting the mine property from further damage
- Rehabilitating the mine

To be considered for membership on an MRT, each person must meet the following requirements:

- They must have worked in an underground mine for a minimum of one year within the past five years.
- They shall be examined by a physician and certified, per 30 CFR Part 49, to be physically fit to perform mine rescue and recovery work for prolonged periods

under strenuous conditions. The examination shall be completed prior to initial training and annually thereafter.

## 2.1 Responsibilities

### 2.1.1 Emergency Services Manager

- Assure that proper training for underground emergencies is provided, as described in 30 CFR Part 49.
- Ensure that sufficient numbers of qualified volunteers are available to staff the MRTs.
- Notify, in writing, any MRT member who does not meet the qualification requirements that they are not eligible to participate in emergency response activities.
- Support WIPP participation in Mine Rescue activities including Mine Rescue Associations, Emergency Response Committees, and other volunteer activities.

### 2.1.2 Mine Rescue Team Coordinator/Trainer

- Ensure eight-hour monthly training is scheduled.
- Review training report monthly to verify that MRT members have met all training requirements and are eligible to participate in emergency responses.
- Provide status of MRT members qualification to the manager of Emergency Services.

### 2.1.3 Mine Rescue Team Members

- Provide initial medical assistance for underground emergencies.
- Provide underground search and rescue capabilities for trapped miners.
- Respond to offsite underground emergencies as requested by Memorandum of Understanding (MOU) with other mines.
- Participate in recovery operations as directed by the WIPP FSM.

### 2.1.4 Occupational Health Services

- Ensure that the annual physical examination meets the requirements contained in 30 CFR §49.7.

- Ensure that the annual physical review cycle includes an annual mask fit test and pulmonary function test.

### 2.1.5 Managers

- Encourage participation.

- Support training program for team members.

## 2.2 Training

Participating mine rescue members will meet training requirements. Members who have not completed the training requirements will not act as part of a working team until requirements have been completed. Training requirements involve the following:

- A team member will be ineligible to serve on a team if less than 40 hours of training is received during one year. Eight-hour training is conducted monthly to ensure that MRT members have the opportunity to complete the required number of training hours.

- Each new team member, prior to serving on the team, shall complete a minimum of 20 hours of initial training as prescribed by MSHA.

- Advanced mine rescue training as prescribed by MSHA will involve a continuous training effort.

- Training records are maintained in the site training facility as specified by 30 CFR §49.8, with copies in the mine rescue station. The mine rescue training coordinator will provide training attendance sheets to Technical Training.

- Training activities will be completed separate from work activities.

The U.S. Department of Energy (DOE) has mandated participation of WIPP MRTs in MSHA-sanctioned mine rescue competitions as a validation of training.

## 2.3 Activation

In the event of a mine emergency that requires the WIPP MRTs to be activated, the FSM, or his designee, will notify the MRT captains. The MRT captains, who maintain a current call-out list of members of the MRTs, will then notify their respective team members. If the WIPP MRTs cannot be activated, the FSM will approve the contacting of local potash mines to activate their MRTs through the respective MOUs.

Mine rescue cooperative MOUs have been agreed upon with the following local mines to assure that two teams are always available as specified in 30 CFR §49.6, with travel time within 30 minutes. The local mines are Intrepid and Mosaic. Emergency Services

will be responsible for maintaining a current copy of the MOUs between the DOE, and Intrepid and Mosaic.

The FSM or his designee will request the Central Monitoring Room to confirm that two MRTs have been notified and activated.

For non-WIPP events, the WIPP MRTs are activated at the direction of the FSM with concurrence by the DOE.

### 2.4 Mine Rescue Routes of Travel

It is fundamental that a rescue team should explore a mine via the fresh air route. There are two reasons for this practice:

- The danger to the exploring team is lessened.
- The fresh air base can be located closer to the disaster area.

A fresh air base is an area where respirable air has been established. It is a point of departure for the MRT. Only a fully equipped MRT will be allowed beyond the fresh air base.

Prevailing circumstances may make it impossible to travel in fresh air. The team must always be sure that a safe route of retreat is available, with no chance of being "cut off" from a means of retreat.

The route of travel must always be properly marked by an advancing rescue team. The two principal reasons for this rule are as follows:

- So the team members can retrace their travel route, preventing the possibility of the team becoming lost under conditions of poor visibility. A team coming to their assistance also can find the first team by following their route markers.
- So the next exploring team can tell where the previous team stopped its exploration.

The travel route is marked by trailing a communication line, and by the team captain placing dates and initials at intersections, stopping places, impassible roof falls and furthest point of advance. Paint, chalk, or other suitable material may be used for placing dates and initials and for marking travel routes.

## 3.0 MINE EMERGENCY RESPONSE

Prior to underground entry, mine rescue personnel attend a briefing session in the mine rescue room. At the briefing, the team will be told as much as possible about what has happened and what conditions now exist. The teams will obtain all information needed to perform mine rescue operations.

The mine rescue MRTs initially report to the mine rescue station to test and inspect all mine rescue equipment in accordance with MSHA guidelines. The mine rescue personnel must shave facial hair to provide a tight seal with the face mask of safety equipment, before proceeding with emergency response activities.

Team personnel will check the proper fit and function of their breathing apparatus, and then sign into the log book for underground entry. When the FSM (or mine manager/Incident Commander) has determined that a safe entry can be made, the MRT will begin entry towards a designated area. Work will be distributed as evenly as possible among all members. The team will have received an up-to-date mine map from the briefing officer, who gives the map to a designated map man.

Team personnel will check all mine openings, testing for gas and fire in these openings to determine whether a safe entry can be made. An important consideration of an MRT team during exploration and recovery work is the condition of the mine atmosphere. The team captain, with the assistance of the gas man, will make all gas tests. All team members will be kept informed on the conditions of the atmosphere. In addition to checking the atmosphere, the amount and direction of air movement must be noted and nothing must be done to change ventilation until the results are known. If an unsafe condition is detected, the condition will be corrected prior to further mine rescue activity.

As the team advances, the map man will keep a detailed record of the conditions encountered by marking the mine map fully and accurately. The conditions recorded on the mine map will provide personnel with a visual record of what is happening underground. The maps will be used as a basis for making decisions and providing the team with instructions and recommendations.

As the team advances and proceeds with mine rescue activities, team members must be constantly observed by the team captain and/or cocaptain for any signs of fatigue or distress. Communication between the MRT, fresh air base, and the Command Center will be established and maintained throughout the operation. A portable mine rescue communication system will be used. Communications between the fresh air base and the CMR, Emergency Operations Center, or Command Center shall be by mine phone or landline phone. If communication systems fail, the team will retreat and be removed to the fresh air base or to the surface until communication has been reestablished.

All persons found during mine rescue activities will be identified and their locations indicated on the mine map. Mine rescue personnel determine if the persons found are alive or deceased. Deceased persons must be identified and their location marked on the map. Deceased persons will be left in the mine until the living are provided care.

Injured persons and/or other persons needing mine rescue assistance will be administered first aid as necessary and appropriate. The process for live victims depends upon prevailing conditions. It is of primary importance, however, that these people not be exposed to further danger and that immediate care is provided to these people.

As quickly as possible, MRT members will initiate activities for moving people out of the mine by attaching them to the MRT line. It may be necessary to physically restrain irrational persons during a mine rescue as persons sometimes "bolt" towards fresh air as the entry point nears.

Small controllable fires should be extinguished when they are encountered. Larger fires in dead end drifts can be isolated by temporary seals when they are encountered. Uncontrollable fires will be reported to the Command Center as soon as is reasonably possible upon discovery. No attempt will be made to seal the area until the overall effects are known and the team's safety has been considered.

## 4.0 REFERENCES

30 CFR Part 49, "Mine Rescue Teams"

MSHA Mine Rescue Training Modules (metal/nonmetal) 2002-2007

Draeger BG 174A Operating and Maintenance Manual

Draeger BG4 Operating and Maintenance Manual