

DIVISION OF MINES	CHAPTER: III Emergency Response
PROCEDURES MANUAL	
PROCEDURES NO: 1.03.01	
ISSUE DATE: January 1, 1997	
SUBJECT: Emergency Response Team LAST REVISED: January, 1999	

OBJECTIVE AND INTENT

To provide area Emergency Response Teams, comprised of DM field personnel prepared and equipped to respond to and investigate, major emergency events such as: mine fires, explosions, fatalities, and entrapments in order to protect the safety and health of those involved in the mining of coal.

GENERAL

1. The Emergency Response Team (ERT) will be comprised of DM inspection staff, specialists staff, and other DM personnel, organized within each inspection area and trained and equipped for effective and efficient response to major mine emergencies. Each area team will be comprised of four DM field personnel, with one of the four designated as the team leader for that specific field inspection area, Big Stone Gap or Keen Mountain. Both teams will be under the direction of the Emergency Response Team Coordinator, who will have direct communication with the Chief. Each area team and the ERT coordinator, will be assigned a pager for immediate contact when away from personal telephones. The names and personal telephone numbers of ERT personnel, and the pager numbers for the area teams and coordinator, are listed and kept updated in the DM Mine Emergency Response Directory provided for all DM personnel.
2. All ERT members will be trained in mine rescue and recovery, accident investigation, and in the use of emergency response equipment. Additional training necessary to enhance response and management of emergencies will be provided. Team membership will be rotated in order to provide the training of as many DM personnel as possible in the response and management of emergencies.
3. Procedure 1.03.02 addresses the comprehensive Rescue and Recovery Plan for the Division which provides direction for all personnel in responding to and assisting with mine emergency events.

PROCEDURE

1. EMERGENCY NOTIFICATION

- DM personnel receiving notification of any major emergency event, will obtain the following information, if available:
 - a. Type of emergency
 - b. Company name and mine number
 - c. Mine location
 - d. Telephone number of mine
 - e. Time of occurrence
 - f. Brief description
 - g. Name of person giving report

- DM personnel upon becoming aware of an emergency will immediately notify any member of the affected area ERT and the assigned mine inspector. If an area ERT member is not available, then any ERT member may be contacted.

- The assigned mine inspector, after notifying the area supervisor will dispatch to the scene to assist the ERT.

- The ERT member notified will notify the team leader of the affected area.

- The team leader will notify the coordinator.

- The coordinator will notify the designated team leader in the unaffected area.

- The designated team leader from the unaffected area will coordinate notification of remaining affected ERT area members, the Chief, mine rescue teams, county dispatcher, and mine safety engineer. ERT members and others in the unaffected area will be notified and given any additional instructions.

- The designated team leader from the unaffected area will contact the mine safety engineer. The mine safety engineer will be responsible for providing a 1" to 100' (or as large a scale as available) mine map to the mine site as soon as possible, if needed.

- The ERT personnel at the mine site will contact the designated team leader of the unaffected area to confirm notification of mine rescue teams, when required.

- The affected area supervisor will respond and assist with establishing and coordinating the functions of a designated site command center. The affected area supervisor will be responsible for establishing and communicating with the office command center.

2. FATALITY MANAGEMENT/INVESTIGATION

■ Arrival At Mine Site

- a. Properly identify as DM personnel upon arrival at mine site.
- b. Confirm notification of MSHA, notification of family of victim, and miners representatives by mine officials.
- c. Secure the scene; issue appropriate closure order under section 45.1-161.91 (A-ii)
- d. Obtain any available information concerning the fatality.
- e. Obtain pertinent information concerning the victim.
- f. Review applicable mine records.
- g. Travel to the accident scene and observe the accident area. Document all observations.
- h. The initial investigating ERT member will update the Chief and Coordinator. The team will update other ERT members.

■ Investigation

- a. Coordinate and schedule the investigation with MSHA, company officials, miner representatives and other DM personnel as necessary.
- b. Confirm identity of all mining personnel working in the affected area at the time of the accident.
- c. Team leader will assign investigation duties.
- d. The ERT and MSHA will jointly establish the following investigation procedures:
 - (1) Designated DM and MSHA personnel will examine the accident scene to ensure safety of the investigation team.
 - (2) Designated DM personnel will photograph the accident scene before any other authorized person enters such area.
 - (3) DM will designate personnel to sketch the accident scene.
 - (4) Designated DM personnel will conduct an inspection of the affected area and equipment.
 - (5) Establish a chain of custody of all collected evidence.
 - (6) Schedule interviews of other mine personnel as deemed necessary.

- Interviews
 - a. Select a location and schedule interviews.
 - b. Identify persons to be interviewed.
 - c. Establish the interview format.
 - d. Conduct and record interviews.

- Issue appropriate Notices of Violation and/or Closure Orders.

- Final Report
 - a. Review and analyze all investigation findings.
 - b. Complete and verify a sketch of the accident scene.
 - c. ERT Leader and two other team members will draft the initial written report with assistance from other necessary DM personnel.
 - d. Review draft of the written report with ERT Coordinator and other DM personnel necessary.
 - e. ERT Coordinator submits a draft copy of the final written report to the Chief for review and comments.
 - f. ERT Coordinator formalizes the final written report.
 - g. The final written report is submitted by ERT Coordinator to the Chief for approval.
 - h. Collect all notes, photographs, sketches and other investigation documentation and place in the mine file with a copy of the final report.

3. EXPLOSION MANAGEMENT/INVESTIGATION

- DM personnel will respond in accordance with the emergency notification procedure.

- Arrival At The Mine Site By DM Representative
 - a. Properly identify as DM personnel upon arrival at mine site.
 - b. Consult with mine officials and personnel at the mine site to confirm the number and if possible, location of personnel underground and actions already taken.
 - c. Begin immediately the responsibility of maintaining a record of activities until relieved of this task.
 - d. Evaluate status of surface facilities including: fans, mine office, check-in/out program.
 - e. Evaluate availability of mine supplies for emergency use, including curtains, timbers, cap wedges, nails, saws, and saw blades

- f. Evaluate mine electrical system and locate the type of equipment in the affected area and identify equipment that may create a hazard.
 - g. Notify Chief and convey preliminary information.
 - h. Confirm notification to MSHA, miners' representatives, and families by mine officials.
- ERT personnel will ensure coordination of initial activities
 - a. Set up command center and establish communications with DM office and fresh air base.
 - b. Assign a recorder to maintain a comprehensive record and log all activities during the entire rescue and recovery.
 - c. Assign personnel to secure the area by roping off and guarding the scene.
 - d. Assign a fan attendant to guard and maintain the fan.
 - The ERT team leaders working with supervisors will coordinate work activities on each shift to include:
 - a. Assignments of personnel at mine atmosphere monitoring stations.
 - b. Brief and debrief of mine rescue personnel.
 - c. Monitor mine rescue activities at the fresh air base.
 - d. Ensure that appropriate mine rescue procedures are followed while teams are underground.
 - e. Utilization of electrical specialist, ventilation specialist, and roof specialist for the most effective support.
 - The ERT team leaders will coordinate with supervisors to ensure the functioning of the following during rescue and recovery operations:
 - a. Command Center Coordinator
 - (1) Establish a convenient work station and direct communication link with the fresh air base and other critical points underground and on the surface.
 - (2) Assign personnel to record all activities in a log book, maintaining an accurate account throughout the emergency period.
 - (3) Coordinate briefings and debriefings of mine rescue personnel.
 - (4) Ensure rescue and recovery progress is recorded promptly on a mine map.
 - (5) Monitor and assure an adequate supply of emergency equipment is available.
 - (6) Conduct briefings with mine officials, MSHA, labor, etc.
 - (7) Provide for monitoring of the mine atmosphere at the fan and at other strategic locations.
 - (8) Coordinate and monitor underground work activities.

b. Surface Coordinator

- (1) Maintain communications with the fresh air base on rescue and recovery progress and other related information.
- (2) Provide equipment and supply needs of the command center and mine rescue coordinator.
- (3) Establish and maintain security at mine entrance and all underground mine openings.
- (4) Maintain accurate log of persons entering and leaving the mine.
- (5) Coordinate the placement of rescue and recovery supplies, emergency vehicles, rescue and recovery personnel, media and other authorized persons. Ensure onsite rescue teams are provided adequate rest and food accommodations.
- (6) Verify number and name of mining personnel that reported to work.
- (7) Ensure through the office command center that accommodations for mine rescue teams are provided when extended rescue and recovery work is required.

c. Ventilation Coordinator

- (1) Monitor and maintain continuous operation of the mine fan(s).
- (2) Establish reliable sampling stations to monitor mine atmosphere at pre-selected locations.
- (3) Maintain an accurate and up-to-date log of fan pressure and air quantity and quality at regular predetermined intervals. Gases monitored at the mine fan will include carbon dioxide, carbon monoxide, methane and oxygen.
- (4) Collect and evaluate all mine atmosphere samples, monitor levels of mine gases including carbon monoxide, carbon dioxide, methane and oxygen, and report such information to the command center and mine rescue coordinator.
- (5) Communicate air quality and quantity measurements, significant changes and unusual occurrences to the command center.
- (6) Supervise atmosphere monitoring stations.
- (7) Ensure that mine maps are available and maintained up-to-date with ventilation controls, air quality and quantity readings and pertinent information as related to rescue and recovery.

d. Electrical Coordinator

- (1) Assist and advise command center.
- (2) Ensure the electrical power is maintained in the areas of the mine that are designated by the command center.
- (3) Ensure mine fans are operating normally, examined and maintained to assure continued operations.

- (4) Ensure all hoists and emergency escape facilities are operational and examined as required by law.
- (5) Obtain a copy of the electrical system map of the mine.
- (6) Locate mine equipment in affected area(s) and identify any equipment that may create hazards.
- (7) Coordinate secondary power sources if necessary.

e. Mine Rescue Coordinator

- (1) Provide assistance and advice to the command center coordinator and the Chief in regard to mine rescue and recovery activities.
- (2) Coordinate, with MSHA, notification and scheduling of mine rescue team work activities.
- (3) Assist the command center coordinator with briefing and debriefings of mine rescue personnel.
- (4) Monitor mine rescue team activities
- (5) Maintain an accurate map of rescue and recovery activities.
- (6) Responsible for security of mine rescue recovery maps, telephones, recovery plans, etc.
- (7) Assist the surface coordinator with equipment and supplies as needed by the mine rescue teams.

- Investigation (Same as Fatality)
- Interviews (Same as Fatality)
- Final Report (Same as Fatality)

4. FIRE MANAGEMENT/INVESTIGATION

- DM personnel will respond in accordance with the emergency notification procedure.
- Arrival At Mine Site
 - a. Properly identify as DM personnel upon arrival at mine site.
 - b. On-site Assessment
 - (1) Confirm number and location of all personnel underground.
 - (2) Assure evacuation of all underground personnel not involved in fire fighting efforts.
 - (3) Confirm location of fire, if known.
 - (4) Assure underground electrical power is de-energized except those circuits necessary for fire fighting.

- b. Maintain the status of the mine fan and ventilation system except when changes are coordinated and approved through command center.
 - c. Establish a check in/out system and documentation of all events.
 - d. Assign an ERT member to check operation of fan, obtain air quality samples and monitor the fan.
 - e. Confirm notification with the designated team leader of the unaffected area, the mine rescue teams have been notified, if necessary.
 - f. Notify the designated team leader of the unaffected area and request necessary fire fighting equipment.
 - g. Establish and implement a fire-fighting/personnel-recovery action plan.
 - h. Secure the scene.
 - i. Confirm notification of other required agencies, rescue squads, police, fire department, MSHA, etc.
- Fire Entrapment/Investigation (if applicable)
 - a. Confirm number, names and location of missing personnel.
 - b. Determine if any communications were made with underground mine personnel after the incident. If available, verify the number of people and location.
 - c. Determine primary or alternate routes of escape.
 - d. Determine air flow in the vicinity of fire.
 - e. Determine if any effort was made to short circuit air from the fire area.
 - f. Determine all areas likely affected by the fire.
 - g. Establish a means of transportation for rescue and recovery personnel.
 - h. Establish a means of transportation to fire site for fire fighting personnel and equipment.
 - i. Attempt communication to personnel inby fire and establish communication to an area near the fire site.
 - j. Obtain up-to-date mine maps indicating air flow, ventilation controls, electrical stations, abandoned and worked out areas, escape routes, storage areas of fuel and explosives, battery charging stations, and any other pertinent information.
 - k. Confirm with witnesses or other personnel any information pertaining to efforts to extinguish the fire.
 - l. Confirm location of fire fighting equipment available at site and underground such as: water lines, fire hose, fire outlets, fire extinguisher, alternate water source, etc.
 - m. Coordinate rescue, recovery and fire fighting efforts with mine officials, MSHA, labor, etc.
 - n. ERT will keep appropriate DM personnel updated on available information.

- Investigation (Same as Fatality)
- Interviews (Same as Fatality)
- Final Report (Same as Fatality)

5. ENTRAPMENT MANAGEMENT

- DM personnel will respond in accordance with the emergency notification procedure.
- Arrival At Mine Site
 - a. Identify as DM personnel upon arrival at the site.
 - b. On-site Assessment
 - (1) Confirm number and location of all personnel underground.
 - (2) Assure evacuation of all underground personnel not involved in recovery efforts.
 - (3) Confirm location of the affected area and other areas of the mine that may be affected.
 - (4) When required, assure underground electrical power is de-energized except those circuits necessary for recovery.
 - (5) Confirm location, extent, and number of personnel involved in the entrapment
 - c. Confirm location, extent, and number of personnel involved in the entrapment.
 - d. Establish a check in/out system and documentation of all events.
 - e. Confirm response of necessary extrication equipment to the site.
 - f. Secure the scene.
 - g. Confirm notification of other required agencies, rescue squads, police, fire department, MSHA, mine rescue team, etc.
 - h. The ERT working with supervisor will coordinate an action plan for recovery efforts.
- Entrapment By Equipment Or Fall Of Roof
 - a. Identify person(s) entrapped.
 - b. Determine what efforts are currently being initiated to recover person(s).
 - c. Upon determining these efforts, two DM personnel will be sent immediately underground to the accident scene to assess the safety of the work area and recovery efforts and needs.
 - d. Make arrangements for transportation of recovery team and necessary equipment.
 - e. Ensure open communications between the accident scene and the surface.

- a. Assign ERT members and/or other DM personnel to travel underground to perform recovery work. ERT members will be responsible for logging out extraction equipment.
 - b. An assigned ERT member or other DM personnel will remain on the surface for communications.
 - c. Coordinate recovery efforts with mine officials, MSHA, labor, etc.
 - d. Upon arrival at the underground accident scene, DM personnel will provide assistance as necessary.
- On-site Assessment Of Water/Gas Entrapment
- a. On-site Assessment
 - (1) Confirm number and location of all underground personnel.
 - (2) Assure evacuation of all underground personnel not involved in recovery efforts.
 - (3) Confirm location of the affected area and other areas of the mine that may be affected.
 - (4) If necessary, assure underground electrical power is de-energized except those circuits necessary for recovery.
 - b. Determine primary or alternate routes of escape, if available.
 - c. The designated team leader from the unaffected area will assign an ERT member to dispatch emergency vehicle/equipment.
 - d. Maintain the status of the mine fan and ventilation system except when changes are approved by the command center.
 - e. Assign an ERT member to monitor operation of the fan and obtain air quality/quantity samples.
 - f. Obtain up-to-date mine map indicating air flow, ventilation controls, electrical stations, abandoned and worked out areas, adjacent mine works, overlays, underlays, gas wells, and any other available mapping information.
 - g. Attempt communication to personnel inby.
 - h. Establish communication to an area near the inundation.
 - i. Establish a means of transportation for rescue and recovery personnel.
 - j. Coordinate recovery efforts with mine officials, MSHA, labor, etc.
 - k. An assigned ERT member or other DM personnel will remain on the surface for communications.