Joint Arch Coal, Inc/MSHA MERD and MEO Exercise at the West Elk Mine, April 20, 2011
Mine Layout
11:24 AM, Crews were working in:

- E-South Mains Miner Section
- E-2 Longwall
- E-4 Miner Section
- E-3 Start Line
11:25 AM, A rush of air appears to come from the E-3 Start line damaging ventilation controls in the E South Mains
No contact with Crew in:
• E-3 Set Up

Crews contacted in:
• E-South Mains Miner Section
• E-2 Longwall
• E-4 Miner Section
Preparations for boreholes into E-3 Gate entries near Refuge Chambers
Mine rescue teams find roof falls inby the face in E-2 Gate entry blocking egress.
Mine rescue teams begin exploring E-3 Gate Entry. Damaged ventilation controls encountered. Some CO encountered.
Mine rescue teams test computer system using the mines communications and tracking system to communicate between the exploring teams and the command center.
While the MERD was ongoing, a separate practice was being conducted in another part of the mine. (Near Mine Portal)

Mine rescue teams explored the smoke chamber and the robot explored the entries near the bottom of the shaft using a shaft drop.
Mine rescue teams use MSHA toughbooks and fiber optic cable to communicate between underground fresh air base and surface base at Portal.
Price Mine Rescue Team Truck and Robot Trailer set-up near mine portal. The portal was over 1.5 miles and over a mountain from the command center.
First Minesite Practice Deployment for MSHA Command Center
First Minesite Practice Deployment for MSHA Cisco Communications System
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Mine Portal, Location of Team and Robotic Exercise

Cisco Repeater

Mine Office and Command Center

West Elk Midway Access Point

Cisco Repeater

West Elk Shaft Access Point
Mine Rescue teams eventually reach the missing miners, some of which were in a refuge chamber.
Lessons Learned:

• MERD was Successful
• Logbook Modifications
• Cisco worked Great – Optimization – Additional units
• Mine Rescue team communications
• Completion of Command and Control System
• Additional tests