

Mine Rescue in Indiana: Past, Present and Future

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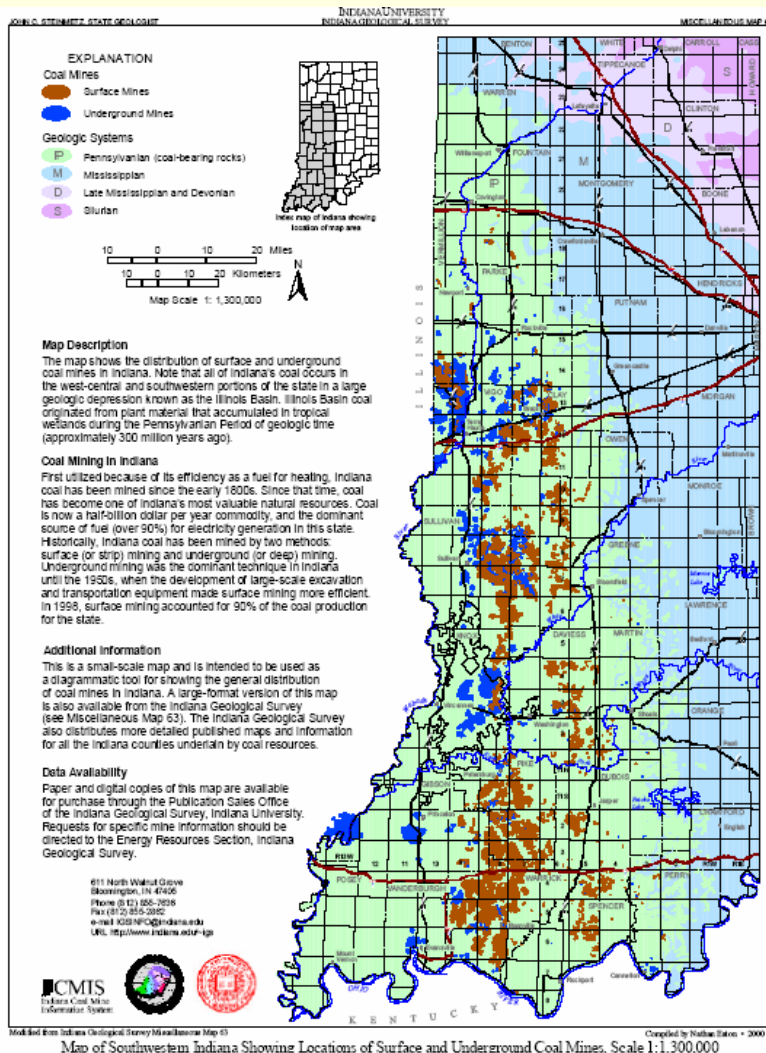
Mine Rescue in Indiana: Past, Present and Future

The Past

Along Time Ago



Indiana Coal Field Map



Underground Coal
Mining Coverage
Area

Miles North to South
100

Miles East to West
50

May, 1920 - Submarine Mine – Clinton, IN

5 Died Explosion

- Three of the victims were rescue workers.

“We got ahead of the air”

- Bare face exploration
- One of the biggest handicaps listed in the final report on the rescue operation was the lack of safety lamps.

“Did not know why more lamps were not kept on hand at \$7 to \$8 dollars per lamp”

- Efforts were made to get a mine rescue car to the mine site. But it was not known if the car was at Terre Haute, Vincennes or Shelburn.

February, 1925 – Sullivan City Mine – Sullivan, IN

52 Died

Explosion

- Bare face exploration
- Some of the rescuers overcome by gases.
- Rescuers relied on Safety Lamps for direction.

“Rescue workers who were carried out overcome by afterdamp became violently mad when the fresh air struck them. They were taken for a walk by other miners until their lungs were filled with pure air.”

December, 1926 – Francisco Coal Company – Francisco, IN

37 Died

Explosion

- Local rescuers first on the scene bareface exploration.
- US Bureau of Mines with rescue crews and truck arrived a few hours later.
- A second explosion occurred shortly after one crew had exited the mine for relief from next crew ready to enter the mine.
- Oxygen breathing apparatus was not used, but gas masks were used to good advantage.

January, 1931 – Little Betty Mine – Dugger, IN

28 Died Explosion

- Seven miners barricaded for 15 hours.
- Volunteer rescue crews, equipped with only flame safety lamps.
- “It was necessary several times to jerk back and get pretty tough with some of the younger members of the rescue crew who tried to forge ahead. They were anxious to get to their buddies and did not seem to care about the danger of the deadly afterdamp.”
- “When we stayed in the mine more than two hours our heads throbbed and it was hard to breathe. We had to come out and let others go back in for a while.”

July, 1937 - Baker Mine – Sullivan, IN

20 Died

Explosion

- Bicknell Indiana Safety Crew with John Oglesby in charge of a fully equipped crew using gas masks and safety devices to fight fire and gas.
- Two additional crews responded from Sullivan, Indiana. Not sure what type of equipment they used.
- US Bureau of Mines from Vincennes was in charge of the rescue work.

May, 1941 – Panhandle #2 Mine – Bicknell, IN

14 Died Explosion

- Bureau of Mines with offices in Vincennes & Bicknell provided rescue teams.
- The mine superintendent Frank Pearce led the rescue team into the mine.
- Rescue teams used oxygen masks.

1942 Rescue Crew
Training at Terre
Haute Indiana



April, 1947 – Spring Hill Mine – Terre Haute, IN

8 Died

Explosion

- Some of the rescue teams that responded had also worked the Centralia, IL disaster in March 1947 when 111 died.
- Rescue team from Terre Haute had one member of the team overcome with Carbon Monoxide.
- Oxygen apparatus was not used until later in rescue operations.
- The mine was sealed for about one month before all the bodies was recovered.

July, 1948 – King Mine – Princeton, IN

13 Died

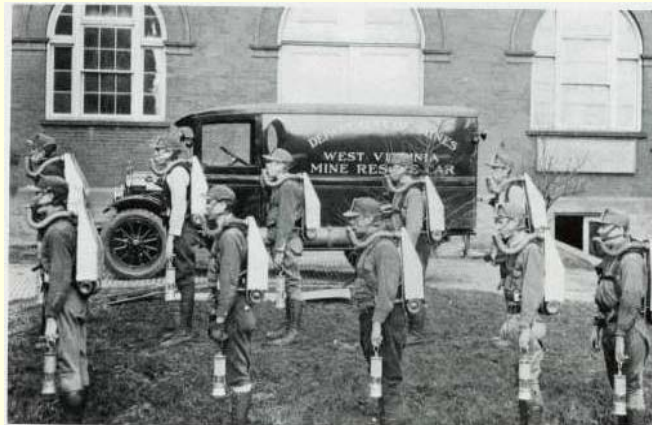
Explosion

- Rescue was conducted by the workers at the King Mine. Many of the rescuers were the miners located in other parts of the mine and they just stayed underground to recover their co-workers.
- No breathing apparatus was used, all barefaced rescue operations was lead by mine management.

March, 1961 – Viking Mine – Terre Haute, IN

22 Died Explosion

- The mine did not have a mine rescue team. But 8 employees had mine rescue training.
- Indiana Bureau of Mines & The Lynch Coal Operations Reciprocal Assoc. maintained two fully equipped Mine Rescue Stations at Bicknell & Terre Haute. Equipped with McCaa 2 hour SCBA & Chemox $\frac{3}{4}$ hour breathing apparatus with all service gas masks.



March, 1961 – Viking Mine – Terre Haute, IN

22 Died

Explosion

- Team members came from Viking Mine, Green Valley Mine, Thunderbird Mine and Enoco Mine.
- The Enoco Mine used the Gibbs Unit Apparatus (mouth piece, goggles, nose clip & blow out saliva trap). Some of the six man Enoco crew consisted of Mike Kensek, Bryan Page, John Hunter, Rex Holmes and Bert McCray. Mike Kensek is the last surviving member of that rescue operation.

1986 – Indiana Bureau and Shand Mining

- Joint effort between Indiana Bureau of Mines and Shand Mining in starting a State Mine Rescue Team. The equipment and training was maintained at the Bureau of Mines office located in Washington, Indiana. Team members was provided by Shand Mining - Apraw Mine. John Stachura - mine superintendent & trainer.

1988 – Indiana Mine Rescue Association

- The Indiana Mine Rescue Association was formed to fund mine rescue contest training in Indiana and to provide support to the Indiana State Mine Rescue Teams.

1993 – Indiana State Team – Air Quality Mine & Coal Inc.

- The Indiana State team consisted of employees from the Black Beauty Coal Company – Air Quality Mine & Coal Inc.
- The training was moved from Washington to the Air Quality Mine Site (Log Cabin)
- Black Beauty also provided the voluntary services of a mine rescue trainer.



1994 – Indiana State Team – Solar Sources

- Solar Sources provides the voluntary services of Mike Stanley as a mine rescue trainer.
- Later, as the Monroe City Mine came on line, additional members with past mine rescue experience joined the Indiana State Team.

Training at Log Cabin
Indiana State Team
MSHA helping with training



2000 - Indiana Mine Rescue Team's

- Two teams were trained and equipped.
- Both State teams compete in Mine Rescue Contests.
- Teams were made up of members from Black Beauty, Solar Sources, Five Star Mining, Gibson County Coal Company and Triad Mining.

Indiana State Teams called to assist with the Dotiki Mine Fire in 2004



2005 – Gibson County Coal Company

- The Gibson Mine staffed and equipped their own competition mine rescue team with training conducted at the Gibson Mine.
- Indiana State Team continued with one competition team and started rebuilding for a second team. Members for these State Teams came from Air Quality Mine, Francisco Mine, Five Star Mine, Hazleton Mine, Triad Mine and Howesville Mine.

2006 – Black Beauty Starting Combined Team Air Quality & Francisco Ug.

- At the end of 2006, Black Beauty will start a combined team between AQ & Francisco Ug.
- Indiana State Team will continue with one or more teams depending on the members available.
- Gibson County Mine will continue with one team.

Indiana State Team
2006



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The Present

The State of Mine Safety in Indiana

- The Indiana Department of Labor has improved Indiana Miner safety:
 - Mine Rescue Equipment upgraded.
 - Mine safety and technology program established.
 - Experienced personnel hired.
 - Mine Rescue Manual
 - Mine disaster and rescue drill.
- The rate of injuries and illnesses in Indiana Mines is lower than neighboring states and the national average.
- Since 1993 less than 2% of all coal mine fatalities occurred at Indiana mines.
- **2005 and so far 2006 have both been fatality free years in Indiana.**

Mine Safety and Technology Program at Vincennes University

- Industry identified the need for some 3,000 new miners over the next five years.
 - Retirement of some 1,500 miners and the need for 1,500 additional miners.
- No comprehensive, state wide miner safety training and technology program existed.
- Department of Labor identified the potential safety issues created by the retirement of 1,500 experienced miners and the hiring of 3,000 new miners.
- Result: Miner safety and technology program at Vincennes University.
 - Comprehensive training and certification; and
 - Associates in Arts and Sciences degree.
- Result: Mining Companies also starting their training programs

Major Moves at the Bureau of Mines

- The Indiana Bureau of Mines headquarters moved from Willow Street to the Vincennes University Technology Center.
 - Closer to VU's mine safety and technology program.
 - Share space and shared ideas.
- New Deputy Commissioner of the Bureau of Mines.

Mine Rescue and Disaster Drill

- This last June Indiana's underground coal mine industry, Federal MSHA, the Indiana Coal Council and the Indiana Department of Labor conducted a comprehensive, unannounced underground coal mine disaster drill.
- First such drill in memory and the first ever state sponsored drill to be conducted underground in an actual coal mine.
- First responders in Vincennes and surrounding areas were also engaged in the drill.
- The purpose of the drill was to test the State's preparedness to respond in case of a mine emergency.

Mine Rescue Manual and Mine Inspections

- The mine rescue drill was also the first opportunity for the Department of Labor, Bureau of Mines to test its new Mine Emergency Response Plan.
- The Deputy Commissioner conducts routine, quarterly inspections of each of Indiana's underground coal mines.

What's Left to Accomplish

- Mine rescue command center training and command center drills.
- Routine, unannounced mine disaster and rescue drills.
- Routine SCSR user drills.
- Ensure the continued viability and existence of at least one fully staffed State sponsored mine rescue team.
- Statutory amendments designed to update Indiana's mine rescue laws and help alleviate redundancies between MSHA and Indiana's Department of Labor.

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The Future

Technology

- Wireless Communication
- GPS
- Individual locators
- Emergency Shelters (designated location)
- New Breathing Apparatus

Laws & Policies

- Life Lines (helps people in both directions)
- Storage of SCSR's (teams use as resource)
- Emergency Response Plans
- Changes to the Miner Act affecting mine rescue teams

Training

- Competition Training

“Trophies make us feel good”

- Practical or Hands on Training

“Hands on training gives you a good feeling”

- With New Technology More Training Needed

Future Indiana Mine Rescue Teams

- Indiana State Mine Rescue Team
- Gibson County Mine Rescue Team
- Black Beauty Mine Rescue Team
- Five Star Mining ?????

The MINER Act of 2006



Under The Miner Act of 2006 each mine must have:

- An employee knowledgeable in mine emergency response on each shift.
- Two certified mine rescue teams who
 - Are familiar with the operations of the mine.
 - Participate annually in two local mine rescue contests.
 - Participate in mine rescue training at the mine.
 - Are available within one hour ground travel time from the mine rescue station.

The Miner Act defines four types of mine rescue teams.

- ***Individual mine site team*** whose members are employed at the mine.
- ***Composite team*** where at least two members must come from the covered mine.
- ***Commercial team*** whose members are provided by contract thru a third party. (The VA State Designated Mine Rescue Program falls in this category)
- ***State-sponsored team*** made up of state employees.

Mine rescue requirements for mines with more than 36 employees:

- One of the two required mine rescue teams must be an:
 - individual mine site team which trains annually at the mine.
 - or a composite team which trains semi-annually at the mine.
- The second team may be a
 - commercial team which trains quarterly at the mine.
 - or a state-sponsored team which trains annually at the mine.

Mines with 36 employees or less must have two mine rescue teams who are:

- Familiar with the operations of the mine.
- Participate in two local mine rescue contests each year.
- Participate in semi-annual training at the mine.
- Available within one hour ground travel time from the mine rescue station.
- Knowledgeable about the operations and ventilation of the covered mines.
- Members with at least 3 years underground experience in the last 10 years.

Summary of Mine Rescue Team and Training Requirements


Mines with More than 36 Employees	
Team Requirements	Training Requirements
One Individual Mine Site Team Or One Composite Team	Annually Or Semi-annually
PLUS	
One Commercial Team Or One State-Sponsored Team	Quarterly Or Annually

Mines with 36 Employees or Less	
Two mine rescue teams	Semi-annually

Rapid Emergency Response System

– Mine Rescue Regs

- Secretary must finalize regulations on mine rescue teams within 18 months
- Regulations must be effective by **December 15, 2007**



THE END