

**Commonwealth of Pennsylvania  
Department of Environmental Protection  
Bureau of Deep Mine Safety**



**Quecreek Mine Inundation  
July 24, 2002**

**Report of Investigation**

**Executive Summary**

**Attached is a summary of the significant findings resulting from the investigation into the Quecreek Mine Inundation. The investigation was conducted by the Department of Environmental Protection, Bureau of Deep Mine Safety following the rescue of the nine miners.**

**Date:** July 22, 2003

## **EXECUTIVE SUMMARY**

On July 24, 2002 miners working in the 1<sup>st</sup> Left Section of the Quecreek No. 1 Mine (in Somerset County, Pennsylvania) cut into Saxman Coal and Coke Company's Harrison #2 Mine, a flooded adjacent abandoned mine. Nine men working in the section were trapped by the inundation; nine men working in other parts of the mine escaped from the mine after being warned of the inundation by the 1<sup>st</sup> Left Crew. Following an extensive rescue effort all nine trapped miners were rescued from the mine.

In the wake of the accident the Pennsylvania Department of Environmental Protection (DEP), Bureau of Deep Mine Safety (DMS) commenced an investigation into the accident and its causes. The investigation was conducted cooperatively with the Federal Mine Safety and Health Administration (MSHA). However, despite repeated requests, MSHA has failed to share the conclusions of its investigation with DEP.

In interviews, the miners stated that they did not know that they were approaching close to the Harrison #2 Mine workings. The men explained that they understood the adjacent mine to be some 300 feet away. They also encountered poor roof conditions in the weeks leading up to the inundation, which slowed production and made for poor working conditions. Roof conditions and production improved during the week of the inundation.

Company mine officials and state and Federal inspectors reported that they also did not observe any warning signs of an inundation. A hydrogeologic study conducted as part of the investigation found no hydrogeologic evidence that there would have been any observable warning signs of a pending inundation in the 1<sup>st</sup> Left Section just prior to the inundation. The hydrogeologic study also found that the Quecreek No. 1 Mine was in a wet setting. In the first set of interviews the miners stated there were no warning signs. In a second set of interviews some of those same miners stated that there may have been some warning signs, which they ignored.

The Quecreek No. 1 Mine permit was issued by the Department in 1998 and amended twice prior to the inundation. Quecreek Mining Company's parent company PBS Coals, Inc., hired Musser Engineering, Inc. to prepare the permit application. Musser Engineering, Inc. prepared the initial permit maps, which, among other things, depicted the extent of the Harrison #2 Mine workings. Musser Engineering, Inc. and PBS Coals, Inc. conducted a yearlong search for maps of adjacent mines. They did not find a final map certified or sealed by a Professional Engineer or a Professional Land Surveyor for the Harrison #2 Mine. Musser Engineering relied upon a property map obtained from Consolidation Coal Company, which was not dated or sealed by a Professional Engineer or a Professional Land Surveyor. Musser Engineering, Inc. did not otherwise verify the map.

A Department engineer noticed that the Department did not have a final, certified map for the Harrison #2 Mine. Prior to submitting a permit application, during the permit application review, and after the permit was issued a PBS Coals, Inc. engineer stated that

Musser Engineering, Inc. had a certified map of the Harrison #2 Mine. Each time the Department requested a copy of the map; it was assured by the PBS Coals, Inc. representative that a map would be provided. However, no such map was provided. The map used to depict the extent of the Harrison #2 Mine workings was not a certified map. The availability of a certified final map was not a requirement for permit approval, hence the permit was issued and mining proceeded according to normal procedure.

After the accident Consolidation Coal Company gave the accident investigation team a different version of the property map. This map showed a greater extent of mining in the Harrison #2 Mine than the previous copy.

The joint investigation team located a map of a portion of the Harrison #2 Mine at the Windber Coal Heritage Center dated 1964 (“1964 Map”). This map shows more extensive workings than any other map located, including workings in the immediate vicinity of the location where the Quecreek No. 1 mine broke through. The map was donated to the museum by the descendants of a deceased former state mine inspector, Clyde Maize. No final certified map of the Harrison #2 Mine has been uncovered by the investigation team.

Somerset County tax records for the 121-acre tract where the Quecreek No. 1 Mine cut onto the Harrison #2 Mine state that all coal was exhausted by 1963. However, by 1993, when the tract was sold, the records were revised to state that coal is present on all 121 acres. The 1964 Map, mining by Quecreek Mining and drilling required by the Department after the inundation show that between 33 and 65 acres of the tract remained unmined on the day of the inundation.

The Commonwealth of Pennsylvania has been a pioneer in mine safety, and continues to be recognized nationally and internationally as the leader in mine safety. Pennsylvania’s pre-eminence in mine safety has been evidenced by the many awards it has won over the years, and the low accident and fatality rates in Pennsylvania’s mines. While the successful rescue of the trapped miners at Quecreek again highlighted the competence of Pennsylvania’s mine safety professionals, the ensuing investigation also revealed a need for improvement in certain DEP policies and procedures relating to underground mines. Many of these improvements have been implemented already. Others will be addressed in new policy or legislation. These changes will allow the Commonwealth to continue to be the worldwide leader in mine safety.

The Quecreek “Report of Investigation” recounts the facts of the accident and rescue determined by the investigating team. At the end of the Report are conclusions of fact drawn by the team. After those are policy recommendations made relevant by the facts of the case and intended to enhance mine safety. Finally, the Department of Environmental Protection will present under separate cover new policy initiatives aimed at implementing the conclusions and recommendations presented in the Report.