

TRAIL Spotlight

Fires in Abandoned Coal Mines and Waste Banks

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Coal is a readily combustible rock of carbon and hydrocarbons that is found all across the United States. Due to its combustible properties and relative abundance, burning coal has been and still is a substantial fraction of the US energy market. However, also due its combustible properties, coal veins and mines tend to, well, catch fire. Lewis and Clark reported seeing burning veins of coal in 1805 when they were exploring the Missouri River in what is now central North Dakota.¹ Maybe you have heard of the still burning mine fire in Centralia, Pennsylvania where a strip mine has been burning since 1962 and could continue to burn for over 250 years.² Abandoned coal mines that catch fire are serious health, safety, and environmental hazards that the US government has been trying to address for decades.

The report, *Fires in Abandoned Coal Mines and Waste Banks*, from the U.S. Bureau of Mines addresses the problems specific to fires in coal mines that have been abandoned. It covers possible sources of ignition, the current technology of the time to help control the fires, what kind of factors influence the propagation of the fires, and what research is being done in the field.

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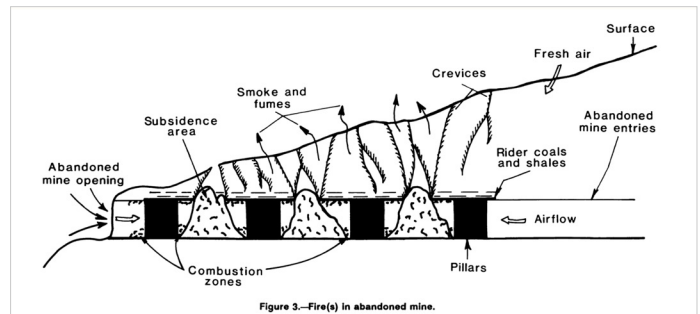


Figure 3.—Fire(s) in abandoned mine.

Fires in an abandoned mine.

References

1. Edward C. Murphy, “Observations of Burning Coal Veins and Recognition of the Origin of Clinker by Members of the Lewis and Clark Expedition in North Dakota” (paper presented at the Geological Society of America Denver Annual Meeting, November 7–10, 2004), <https://gsa.confex.com/gsa/2004AM/webprogram/Paper75537.html>.
2. Eoin O’Carroll, “Centralia, Pa.: How an Underground Coal Fire Erased a Town,” *Christian Science Monitor*, February 5, 2010, <https://www.csmonitor.com/Environment/Bright-Green/2010/0205/Centralia-Pa.-How-an-underground-coal-fire-erased-a-town>.