Coal Combustion Waste Mine Filling: An Environmental Perspective

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ABSTRACT

The United States Environmental Protection Agency (EPA) is developing a draft rule to regulate coal combustion waste (CCW) disposal and use in coal mines. The disposal or use of CCW in coal mines is expected to increase greatly as a result of changes in combustion technology and the emergence of more minemouth coal-fired power plants..

There is a growing question, however, as to f whether minefilling is a beneficial practice or primarily a means of inexpensive disposal for power plant wastes that may substantially worsen the water quality problems it is supposed to address. Citizens and environmental organizations assert that data from several mines where CCW has been disposed indicates that contamination of mine waters by metals and other pollutants exceeds levels previously caused by acid mine drainage (AMD). They are concerned that safeguards at most CCW minefills are too lax to prevent a worsening pollution problem from coal ash disposal. State and federal officials maintain that the minefilling of CCW improves water quality in mines by raising the pH of acidified waters. They point to monitoring data from mines with CCW placement to support the position. Those concerned about the practice acknowledge that a raised pH initially occurs in waters draining from some minefills, but fear that this benefit may be temporary and that other adverse impacts to water quality are being overlooked or in many cases may never be monitored.

This presentation and paper will provide an overview of these issues. It will (1) examine minefill permits and evaluate the safeguards imposed by state regulators; (2) determine, using existing data, if CCW disposal in these mines is impacting positively or negatively, groundwaters and surface waters and (3) discuss the policy implications of these findings for EPA's upcoming rulemaking on CCW minefill.