



Highlights of [GAO-10-206](#), a report to congressional requesters

## Why GAO Did This Study

Surface mining for coal in Appalachia has generated opposition because rock and dirt from mountaintops is often removed and placed in nearby valleys and streams. The Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior and states with approved programs regulate these mines under the Surface Mining Control and Reclamation Act (SMCRA). The Army Corps of Engineers (Corps), the Environmental Protection Agency (EPA), and states also regulate different aspects of coal mining, including the filling of valley streams, under the Clean Water Act. Under SMCRA, mine operators must provide financial assurances sufficient to allow mines to be reclaimed. Under the Clean Water Act, the Corps may require financial assurances that the impact of mines on streams can be mitigated. GAO was asked to examine (1) the approaches OSM, the states, and the Corps have taken to obtain financial assurances for surface coal mines with valley fills; (2) federal and state agencies' monitoring of these mines after reclamation and mitigation are complete; and (3) the federal laws agencies may use, and have used, to address latent environmental problems. GAO gathered information from state and federal agencies in Kentucky, Tennessee, Virginia, and West Virginia about their financial assurances practices, long-term monitoring, and use of federal laws to address environmental impacts at former mine sites. This report makes no recommendations.

View [GAO-10-206](#) or [key components](#). For more information, contact Anu Mittal at (202) 512-3841 or [mittala@gao.gov](mailto:mittala@gao.gov).

## SURFACE COAL MINING

### Financial Assurances for, and Long-Term Oversight of, Mines with Valley Fills in Four Appalachian States

#### What GAO Found

OSM, the states, and the Corps use different approaches to financial assurances for reclamation and mitigation. Under SMCRA, states have flexibility to require mine operators to provide a bond for the full cost of reclamation or participate in an alternative bonding system such as a bond pool, which may combine bonds, taxes on coal production, and other sources of funding. West Virginia relies exclusively on an alternative bonding system, while Tennessee exclusively uses a full-cost bonding system. The other two states, Virginia and Kentucky, rely on a combination of full-cost bonds and an alternative bonding system. Under the Clean Water Act, the Corps has discretion to require that mine operators provide assurances that funds will be available to mitigate the effects of burying streams with valley fills but it has not done so in the four states we reviewed. Instead, the Corps has relied on other mechanisms to ensure that mitigation will be completed satisfactorily, according to Corps officials. For example, some Corps officials said they rely on SMCRA financial assurances to ensure required mitigation.

OSM, EPA, the Corps, and the four states' mining and environmental agencies are not required to monitor former mountaintop mines with valley fills for long-term environmental degradation after reclamation and mitigation are complete and financial assurances have been released. However, several of them, along with the U.S. Geological Survey, have conducted or funded analyses of conditions near reclaimed mine sites with valley fills that have shown environmental impacts. Specifically, analyses have shown that (1) reforestation efforts at some reclaimed surface coal mine sites needed improvement; (2) surface coal mine sites have contaminated streams and harmed aquatic organisms; (3) valley fills may affect water flow; and (4) mine operators have not always returned mine sites to their approximate original contour when required to do so under SMCRA. Federal and state agencies have taken some actions to respond to these findings, including adopting new guidelines for reforestation practices.

Several federal laws may be available under limited circumstances to address long-term environmental problems at former mine sites. These laws include SMCRA; the Clean Water Act; the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), also commonly known as Superfund; and the Resource Conservation and Recovery Act. For example, the Clean Water Act authorizes EPA or a state to require a permit if discharges are detected from a former surface mine, and CERCLA may authorize EPA to respond to certain pollution from former surface mines. According to the agencies, they have rarely or never needed to use these authorities.

We provided a draft of this report to OSM, the Corps, EPA, Kentucky, Virginia, and West Virginia for review and comment. The federal agencies generally agreed with the report, while the states were critical of what they perceived to be the message of the report.