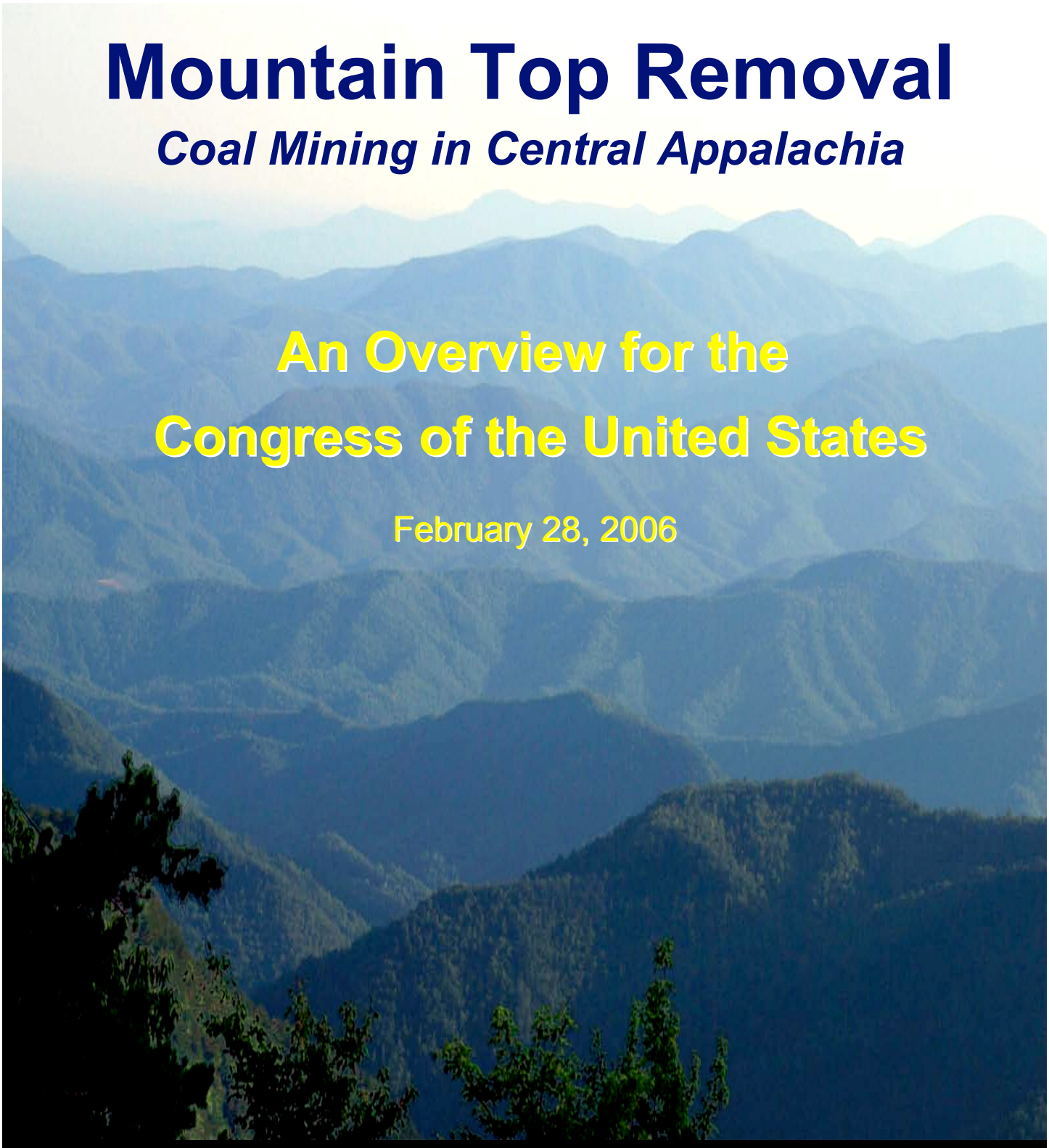
Mountain Top Removal

Coal Mining in Central Appalachia



An Overview for the Congress of the United States

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From the Rockies to the Appalachians, America's mountains have always been integral to our nation's economy, environment, history, and culture.

What is Mountaintop Removal?

An MTR Primer

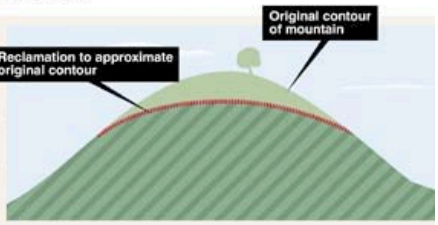
from the ***Charleston Gazette***

Moving mountains

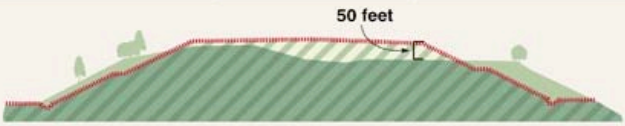
Approximate original contour (AOC)

Federal law generally requires strip-mined land to be reclaimed so that it "closely resembles the general surface configuration of the land prior to mining."

Mountaintop-removal mines can be exempted from this requirement. But to qualify, coal operators must show that if they flatten the land, they have concrete plans for future development. In West Virginia, it hasn't worked out that way.

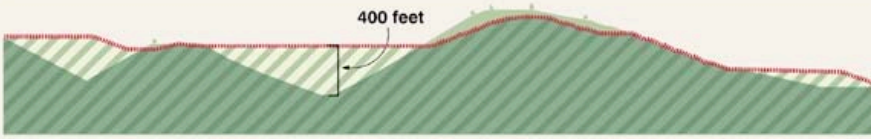


Peerless Eagle Coal Co. Nicholas County 1,323 acres Permit No. S-3021-93



Under old state rules, mines could change elevations by 50 feet or less and be considered approximate original contour. Otherwise, they had to get a mountaintop-removal variance from the AOC requirement.

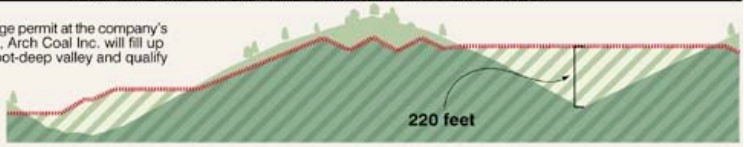
Independence Coal Co. Boone County 1,676 acres Permit No. S-5023-96



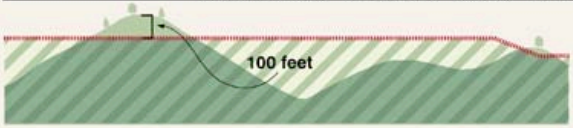
Today, these mines can cut hundreds of feet off mountains, and dump the leftover rock and earth into gigantic valley fills without getting a variance. This A.T. Massey mine will dump more than half of the material it removes to uncover coal into valley fills.

Hobet Mining Inc. Boone County 2,073 acres Permit No. S-5003-96

At its new Westridge permit at the company's Hobet 21 complex, Arch Coal Inc. will fill up more than a 200-foot-deep valley and qualify as an AOC mine.



White Flame Energy Mingo County 879 acres Permit No. S-5020-97



This White Flame Energy mine received an AOC variance for mountaintop removal. DEP said it qualified as improving the land because the company will turn forest land into commercial woodlands.

All diagrams are drawn to different scales.

Source: W.Va. Division of Environmental Protection, Congress, Arch Coal Inc., U.S. Office of Surface Mining

Design: **ALEX MORGADO**, Research: **KEN WARD JR.** / Sunday Gazette-

Removal and Fill

"After clear-cutting a peak's forest, miners shatter its rock with high explosives. Then they scoop up the rubble in giant draglines and dump the overburden, as they call it, into a conveniently located hollow, or valley."

from "When Mountains Move," National Geographic, *Jan, 2006, by John G. Mitchell.*

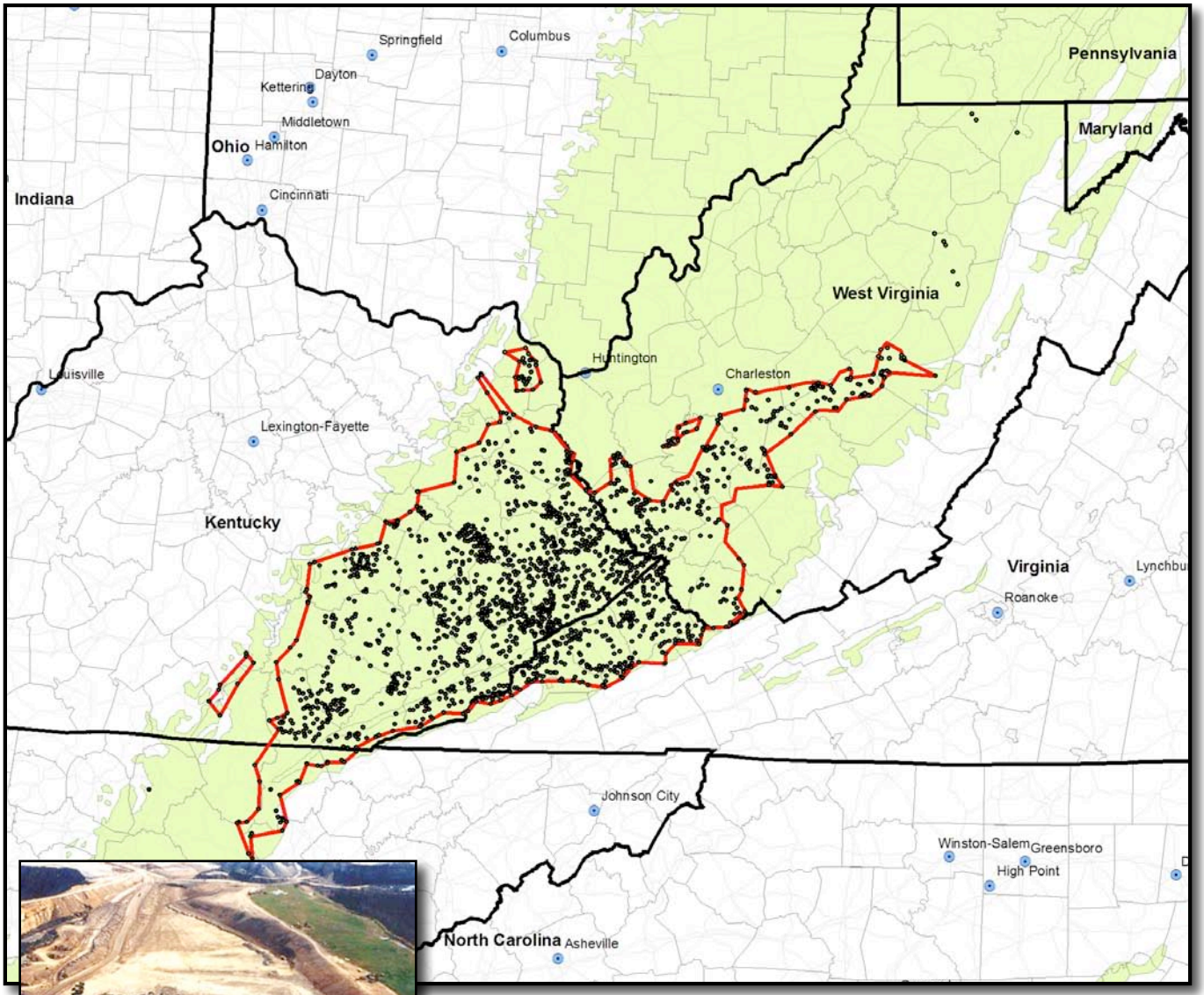
Coal seams

Removed area

Valley fills

Valley Fill Permits in Appalachia

(as of 2002)



Appalachian Coal Facts

WV employment in MTR as a percent of total: **1.2%**

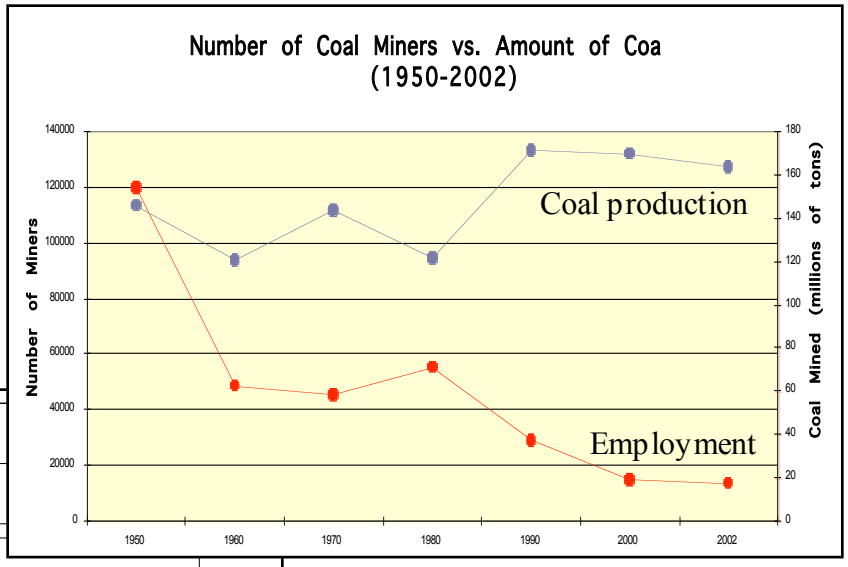
Electricity produced by MTR as a percent of Nation's total: **3%**

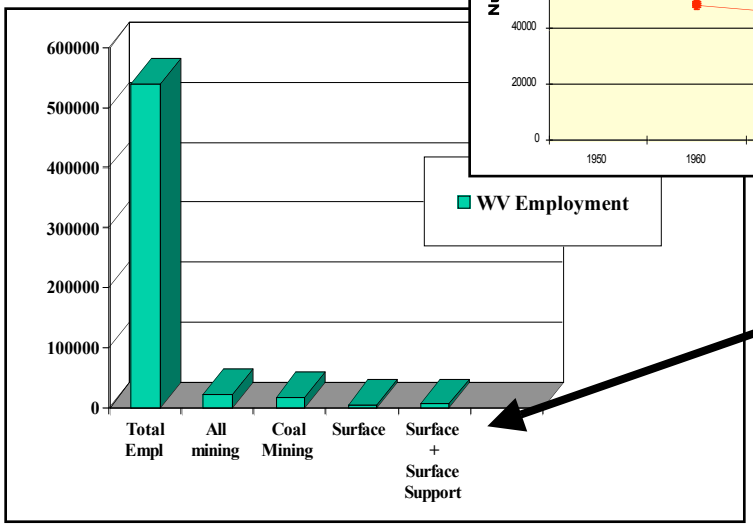
Remaining years of Appalachian coal reserves at current production: **30-50**

Economics and Future of MTR

In West Virginia, mountaintop removal has brought:

Fewer jobs

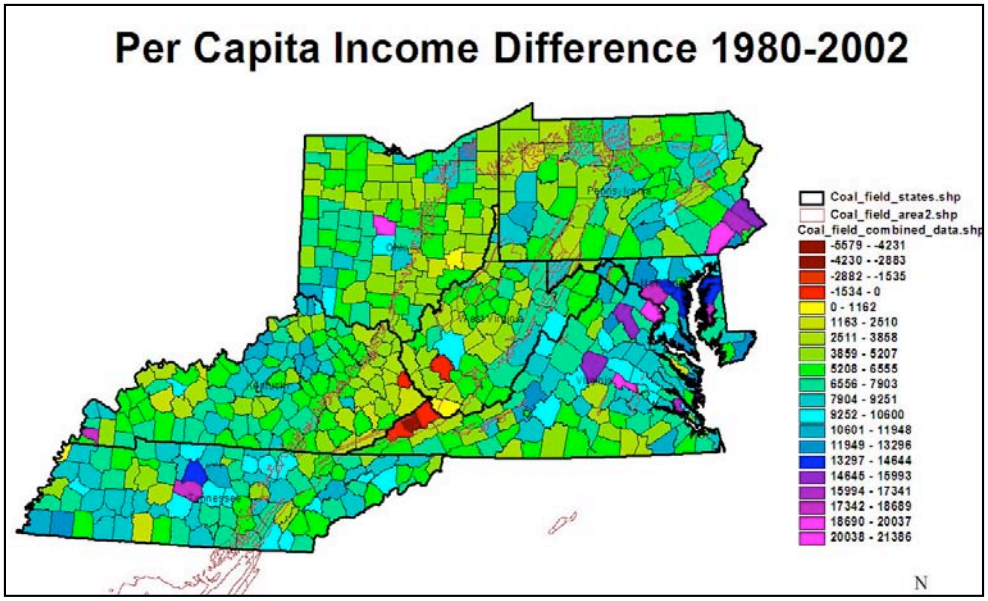




1.2% of total Employment

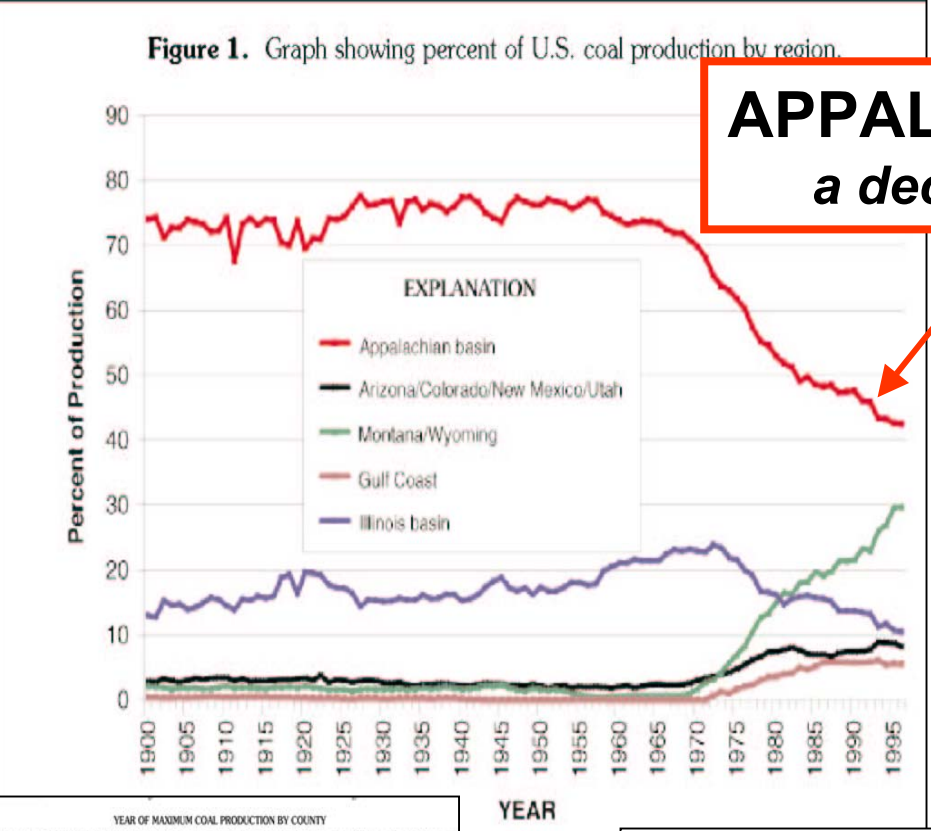
US Census Bureau; 2002 Economic Census *Summary Statistics by 2002 [category] West Virginia*

Increasing poverty



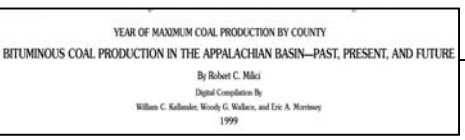
Annual Income, US Census data

APPALACHIAN COAL:
a declining resource

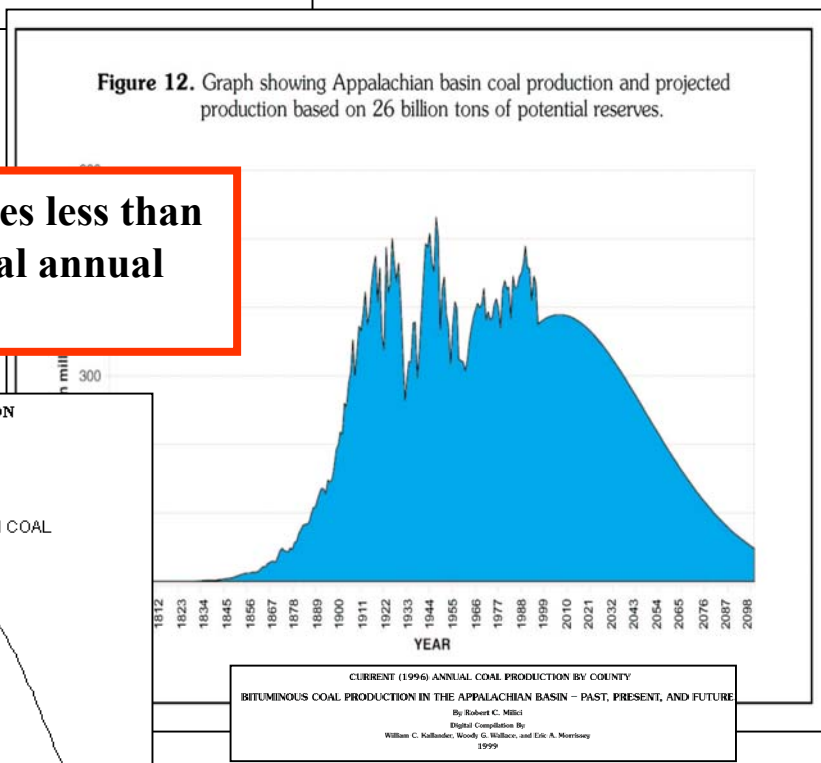


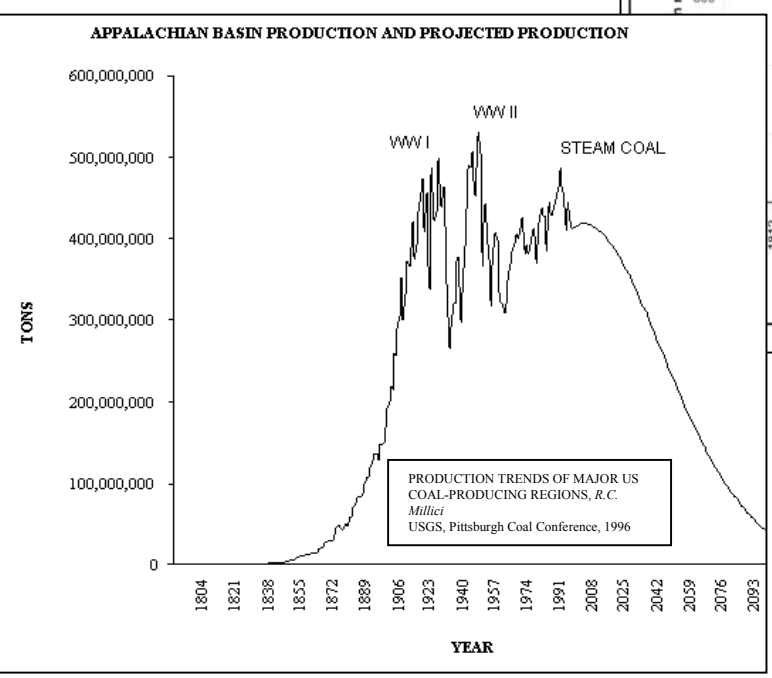
"For the northern and central Appalachian Basin coal regions .. Sufficient high-quality, thick, bituminous resources remain In these beds and coal zones to last for the next one to two decades at current production."

US Geological Survey Professional Paper 1625-C, 2000 Resource Assessment of selected Coal beds and Zones in the Northern and Central Appalachian Basin Coal Regions, Northern and Central Appalachian Basin Coal Regions Assessment Team; Chapter A, Executive Summary, p. A3.



MTR mining in WV produces less than 60 mst/yr of the nation's total annual production of 1100 mst.





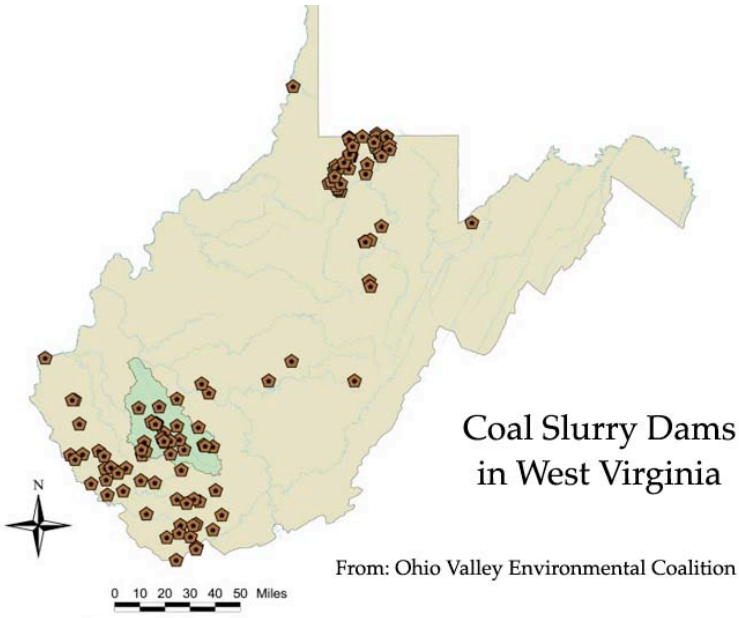
remaining production: approx. 31 yrs

Sludge Dam Safety and Pollution

Chemical analysis of coal Slurry from mines in the fire clay zone, of central Appalachia are representative of Appalachian coal. Tests have shown metal concentrations in the following ranges for various heavy metals (in parts per million):

Antimony .35 to 2.3
Beryllium 1.0 to 13
Cadmium .0027 to .52
Chlorine 130 to 2,300
Chromium 6.5 to 33
Cobalt 1.5 to 11
Lead 2.7 to 25
Manganese 1.9 to 43
Nickel 3.7 to 24
Selenium 1.3 to 7.3
Arsenic .7 to 53
Mercury .005 to .3

USGS Professional Paper 1625-C; Chapter F

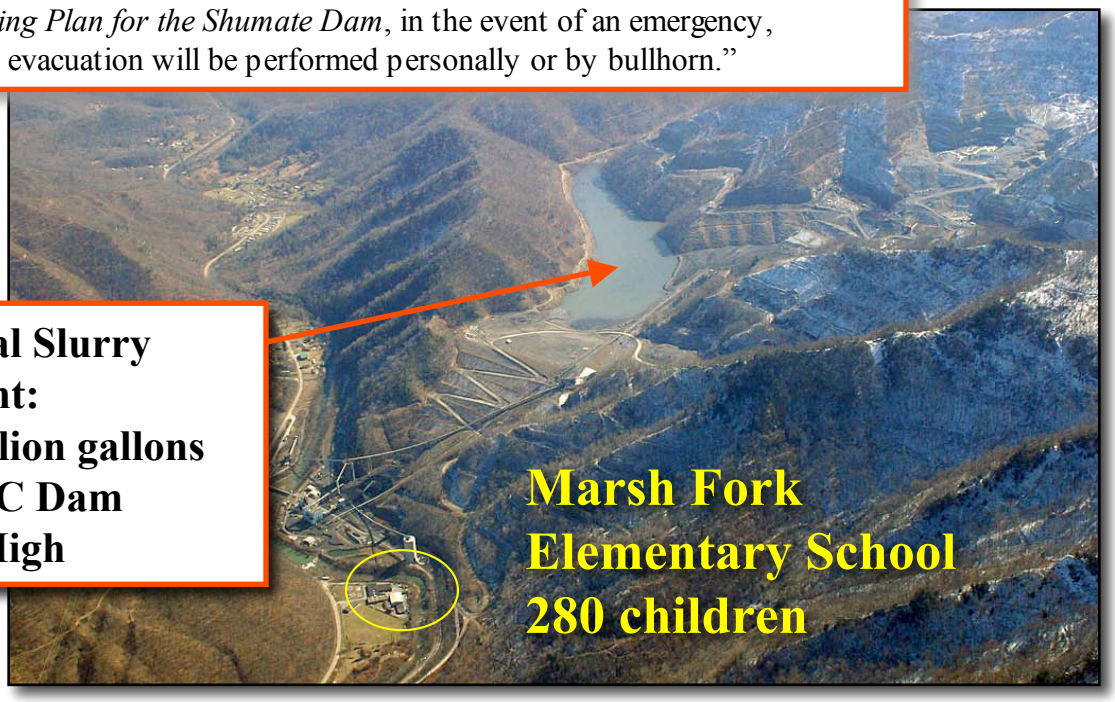


Coal Slurry Dams in West Virginia

From: Ohio Valley Environmental Coalition

Martin County, KY, Sludge Dam Spill in 2000

The placement of sludge dams can impose substantial risk on communities. For instance, the placement of the Shumate impoundment above Marsh Fork Elementary School in Sundial, West Virginia, has put the school children and nearby communities at risk of dam failure. According to the West Virginia DEP *Monitoring and Emergency Warning Plan for the Shumate Dam*, in the event of an emergency, "Notification and evacuation will be performed personally or by bullhorn."

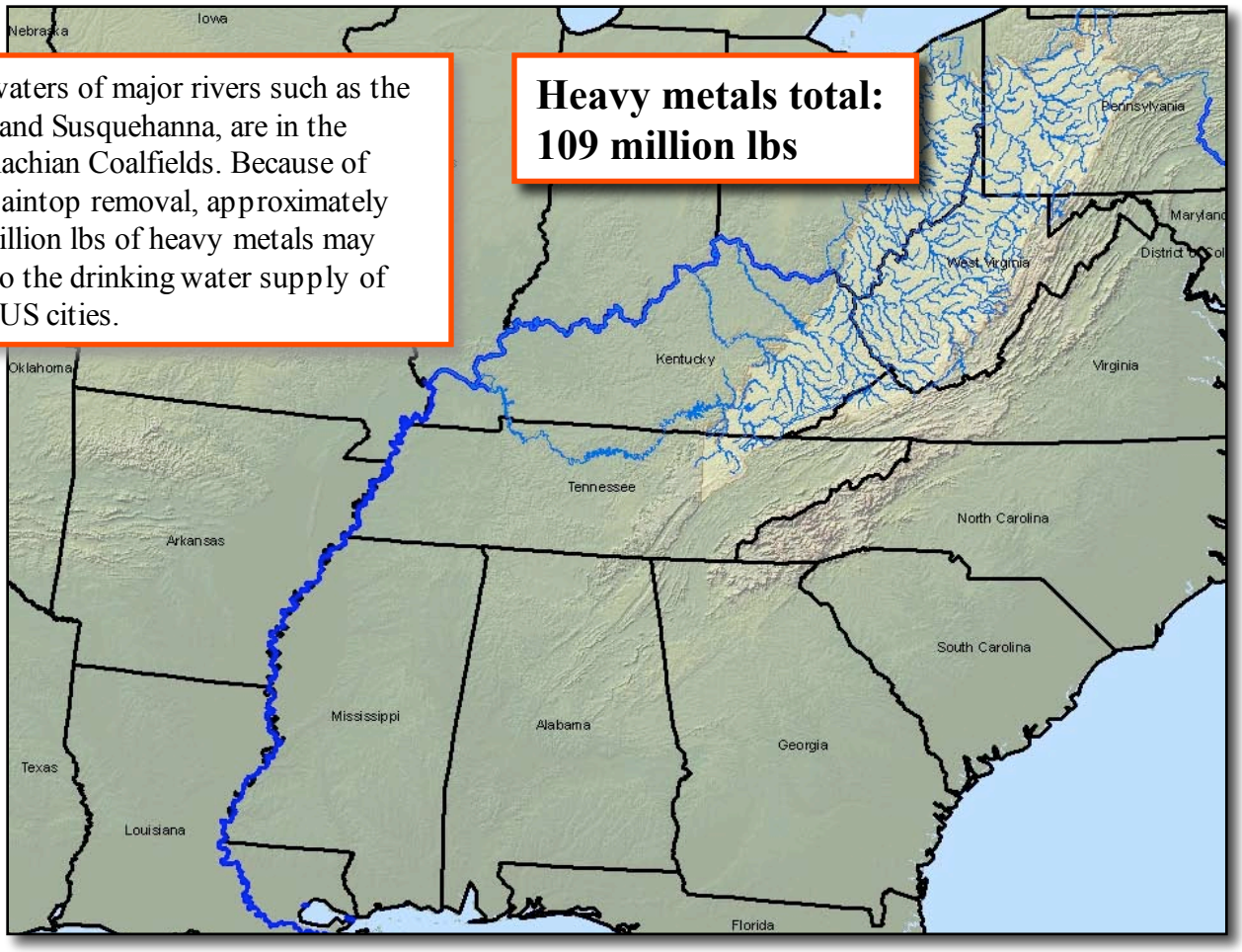


Shumate Coal Slurry Impoundment:

- **2.8 billion gallons**
- **Class C Dam**
- **385' High**

Headwaters of major rivers such as the Ohio and Susquehanna, are in the Appalachian Coalfields. Because of mountaintop removal, approximately 109 million lbs of heavy metals may get into the drinking water supply of major US cities.

Heavy metals total: 109 million lbs



MTR Coal Production Will:

1. Permanently alter ~ 816 thousand acres [1]
2. Add to the 1924 miles of directly impacted streams[2]
3. Continue to provide < 1.2% of WV jobs
4. Continue to produce less coal, declining from the 5.2% of current US Production[3] and a declining amount of the current % of US electrical load ~ 3.4%
5. Produce local / regional physical threats from impoundment failures, as extreme weather events become more likely[4]
6. Increase health risks from exposing heavy metals to down-stream areas including the Ohio/Mississippi valleys
7. End within 20 to 50 years as reserves are exhausted

[1] Draft Environmental Impact Statement, 2003
[2] IBID3
[3] USDOE/EIA – Annual Energy Review, 200
[4] Kennedy, D., SCIENCE, p. 15 VOL 311, 6 January, 2006

For no permanent value to the American people MTR will do irreparable damage to the mountains and forests of Appalachia and to the drinking water supplies of major metropolitan areas in the Ohio River Valley and across the East.