While 'zombie' mines idle, cleanup and workers suffer in limbo

Instead of paying to clean up the mess left by mining, companies are warehousing their operations indefinitely.

Mark Olalde and Joe Yerardi

Image credit: Mark Olalde/Center for Public Integrity

Sept. 4, 2019

https://www.hcn.org/issues/51.20/mining-while-zombie-mines-idle-cleanup-and-workers-suffer-in-limbo?fbclid=lwAR04m17SbEpc 61Eh1llzlWyhZ3keUBfzjQrPNBJz AJrMu9YiYjDSnWKWc

This investigation was produced in collaboration with High Country News, The Center for Public Integrity and the Ohio Valley ReSource.

The sound of metal banging against metal broke the calm on the high mesa separating Colorado's Paradox and Big Gypsum valleys. An old rusted headframe marked the entrance to an abandoned uranium mine that, from a distance, looked as if its workers were simply off on a lunch break.

Jennifer Thurston, a local environmentalist, paused at the edge of the dirt road, wondering what caused the noise. Then she walked closer, finding ample evidence of the site's long disuse. Ore sat in a hopper, likely untouched since the mine — known as Van 4 — last produced in 1989. Any loose metal and wiring had long since been stripped from two buildings, one of which looked ready to collapse.

"They're just sitting out there doing nothing," Thurston said of the uranium mines dotting southwestern Colorado. "They're zombies."

Meanwhile, about 1,500 miles away, out-of-work coal miners spent weeks this summer protesting, camped out on Kentucky railroad tracks, demanding a paycheck they earned but lost when their operator went bankrupt. Though separated by a generation, along with most of a continent, these Eastern miners are linked to their Western counterparts by a seismic shift in the nation's electricity generation.

Their mines once fueled the coal and nuclear power plants that kept America's lights on. Now, cheaper natural gas and renewables are helping push them into the red.

But instead of properly closing the mines, their owners are idling them indefinitely, throwing workers into limbo and side-stepping legally mandated, but costly, environmental cleanup.

Several dozen U.S. uranium mines and more than 150 coal mines sit idle and have not produced for years, according to a Center for Public Integrity investigation. Also idled long-term are facilities such as processing plants, including more than 40 in the coal industry. Mine owners have exploited regulatory loopholes to warehouse their operations, changing the status of their permits on paper while little to no activity happens on the ground.



Machinery sits idle in May at the Van 4 mine, the subject of a July court decision ruling that it must be shut down and cleaned up. Mark Olalde/Center for Public Integrity

Mining is a cyclical, boom-and-bust industry, so state and federal laws allow companies to pause work while prices rebound. In the coal industry, where the relevant permit status is usually called "temporary cessation," this pause rarely has a cap — although regulators attempt to track the number that have been idled for at least three years. In uranium mining, where operations usually wait in "standby," the limits differ by state — 10 years in Colorado but indefinitely in Utah if "good cause" is shown, for instance.

But many of the mines identified in this investigation have remained "temporarily" paused for decades at a time, despite occasional increases in commodity prices.

And most will likely never produce again.

"There were applications where a company had applied to get a temporary cessation status, and they were just trying to keep from having to do any further mining or reclamation."

Uranium and coal are the mines most often idled for long periods, but the investigation also identified about 120 quarries and five Western gold mines paused for three or more years.

Mine owners argue they're operating within the law, saying higher prices will eventually rescue them. Though government regulators have at times attempted to crack down, their hands are often tied. The U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement, which oversees coal mining, began rewriting weak federal regulations in 1991; faced with industry pushback, it never finished. The agency killed a more recent effort two months after President Donald Trump took office.

Regulators acknowledge that some companies have abused vague laws. "There were applications where a company had applied to get a temporary cessation status, and they were just trying to keep from having to do any further mining or reclamation," said Davie Ransdell, a retired Kentucky coal mine inspector.

The Four Corners region — where Colorado, Utah, Arizona and New Mexico meet — is home to much of the country's historical uranium industry, now largely dormant. These sites add to the air and water pollution and low-grade radioactivity that have been linked to local health problems for decades. In Central Appalachia, heavily mined for 150 years, the omnipresent but dying coal industry has sheared off mountaintops and buried streams.

Larry Bush, a retired coal miner and mine inspector who lives in southwestern Virginia near idled operations, is among those fed up with the lack of cleanup.

"They're destroying everything on Earth and under it," he said.



A distant view of Mount Taylor in northwest New Mexico.

Richie Diesterheft/CC via Flickr

Radioactive legacy

Remnants of America's nuclear past litter the Grants Mining District in northwest New Mexico: signs warning of radioactivity, a spiked drill bit outside the New Mexico Mining Museum in

Grants, businesses offering to help retired miners get U.S. Department of Labor health benefits.

Mount Taylor — "Tsoodzil" to the Navajo Nation — towers over the landscape. At the base of the 11,305-foot-tall inactive volcano sits the Mount Taylor Mine, idled in 1990 and allowed to flood.

The heyday of Southwestern uranium mining lasted just 30 years. Much of the industry, including this mine, has since remained in standby.

The country's last operational underground uranium mine shut in 2015, and open-pit mines haven't produced in decades. Only one mill in Utah and four in-situ-leach operations, in which ore is dissolved belowground and pumped up, are still active. Two other mills and 15 in-situ-leach sites are either officially in standby or not producing. The American uranium industry employed only 372 people last year, down from 1,120 two decades earlier. Production from U.S. uranium mines fell 85 percent during that period, according to the U.S. Energy Information Administration.

At current prices, mining uranium in the Four Corners remains untenable.

But now the Mount Taylor Mine is reopening, at least on paper. Eric Jantz, an attorney with the New Mexico Environmental Law Center, has been fighting the long-idled mine in court. "What we're asking for is what the Legislature demands: that the mine either start producing or it start reclaiming," he said, speaking at his home office, boxes of paperwork and his dog's chew toys competing for space. Out front, a bumper sticker on his car said, "Uranium — Leave it in the ground."

The Mount Taylor Mine's first standby permit was issued in 1999. That means this October the site exhausts the maximum 20 years of inactivity New Mexico allows. In December 2017, the New Mexico Mining and Minerals Division, later backed up by the New Mexico Mining Commission on appeal, allowed the mine to re-enter "active" status even though the mining company's application noted it required eight years to restart production.

Jantz said state regulators "seem to bend over backwards to accommodate the mining interests' needs, at the same time minimizing, belittling and, a lot of times, ultimately dismissing community concerns."

Susan Torres, spokeswoman for the state natural resources department, wrote in a statement that companies can't clean up their site while in standby. The mining division "approved the Permittee's proposal to resume active status for the purpose of undertaking partial reclamation operations," she wrote.

In its court filings, General Atomics subsidiary Rio Grande Resources, which owns the Mount Taylor Mine but didn't make anyone available to comment, said the plaintiffs spread "revisionist history" and that "in light of the several intervening permit actions that have long since become final," standby status didn't begin when mining stopped. In an appellate decision in late July, a state court affirmed the state mining agency's decision to allow the non-producing mine to switch its permit status to "active."

Twenty miles southeast, the Jackpile-Paguate Uranium Mine, once the world's largest open-pit uranium mine, is now a Superfund site. In the broader Four Corners region, the U.S. Department of Energy is supposed to clean up more than 20 such Cold War relics, from former mills to waste piles. Some leak arsenic, lead, uranium and other toxic substances into groundwater. Recently, hoofprints were found leading from an unfenced pollution control pond near Slick Rock, Colorado, indicating that cattle likely drink from it.



A sign warns of an abandoned uranium mine. Two such mines, in addition to a former mill site, surround the Red Water Pond Road Community in the Navajo Nation.

Mark Olalde/Center for Public Integrity

Just inside the southeastern corner of the Navajo Nation in New Mexico, an unsettling sign hangs from barbed wire: "DANGER. ABANDONED URANIUM MINE," a pile of mine waste looming behind it. Residents here in the Red Water Pond Road Community are surrounded by two abandoned uranium mines and a mill.

A cold wind blew dust across the landscape from the pale yellow mounds of waste. Some landed on a modest home where a trickle of cars pulled up one morning in May, carrying researchers from the University of New Mexico and the Southwest Research and Information Center. They'd come to collect blood and urine samples for a project studying whether zinc supplements could reduce the impacts of exposure to the heavy metals in uranium mine waste.

Living around or working in uranium mines can worsen, or even trigger, autoimmune disorders, kidney disease, respiratory issues, hypertension and cancer. A study by the U.S. Department of Health and Human Services, the University of New Mexico and Navajo agencies found that Navajo Nation citizens, including infants, had elevated levels of uranium in their bodies.

"The thing about uranium, we found out: It destroys humans and land."



Thompson Bell, a member of the Navajo Nation, spent five years as a mechanic in a uranium mine. Many of his coworkers have since died from cancer, he says.

Mark Olalde/Center for Public Integrity

Paul Robinson, Southwest Research and Information Center's research director, has tracked the industry for more than 40 years. While the New Mexico Mining Act mandates that waste rock and other infrastructure be stabilized before entering standby status, it allows operators to delay reclamation while mining is paused, he said.

"Leaving the wastes that are generated at a mine uncovered is one of the ways to ensure airborne or waterborne release," Robinson said.

Thompson Bell, a member of the Navajo Nation who spent five years as a mechanic in a uranium mine, grew up here and returned for the study. He said many of his mining coworkers died from lung cancer. The sheep and cattle that used to graze here have all but disappeared, the flocks given up for fear of contamination.

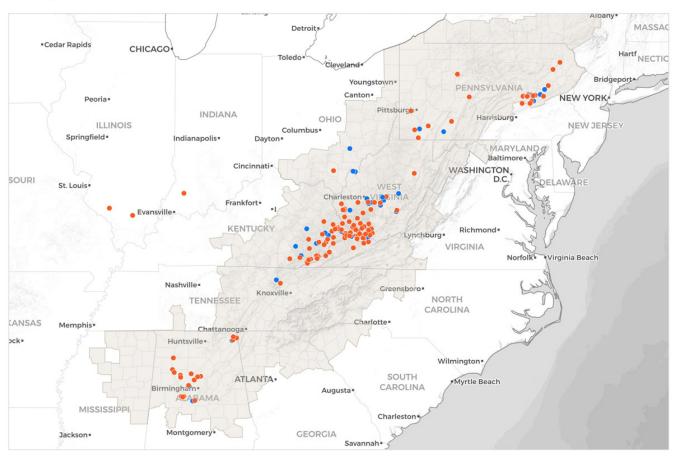
"The thing about uranium, we found out: It destroys humans and land," Bell said.

Opinion remains split locally about whether the return of relatively high-paying mining jobs — if that ever happened — would be worth the human and environmental consequences. Christine Lowery, a member of the Pueblo of Laguna and a commissioner for the county where the Mount Taylor Mine is located, said she welcomes a cleaner economy.

"Those mines were open for one generation," she said. "The legacy lasts forever."

Long-idled coal mines dot Appalachia

Large numbers of mines (orange) and related facilities (blue) have been idled at least three years in Appalachia, especially in the central portion that was once the heart of coal country.



Source: Center for Public Integrity analysis of Mine Safety and Health Administration data

'The wolves are at my door'

More than 20 years ago, Todd Adams followed his father, uncles and grandfathers into the coal mines of Harlan County, Kentucky. The area has a history of bloody labor fights. But even so, he was shocked by what happened after his employer filed for bankruptcy protection on July 1: Blackjewel quietly clawed his final paycheck out of his bank account.

Blackjewel is part of a private coal empire until recently owned by Jeff Hoops, an avid user of temporary cessation. Workers around the country lost their jobs and final paychecks when several of his companies, including another operator called Revelation Energy, sought bankruptcy protection.

"If I can work in this industry another 20 years, that's good for me," said Adams. He participated in this summer's railroad protest but believes the industry will disappear from Harlan within a few decades. "But this younger generation, I don't know what the county holds for them."

U.S. coal production has fallen by a third in the past decade, and temporary cessation has emerged as an escape route for cash-strapped owners. One in five non-abandoned coal mines now sits idle. Hoops' companies have idled coal operations more often and for longer than nearly anyone, and the Blackjewel and Revelation bankruptcy proceedings offer a master class in avoiding liability in a dying industry.

"But this younger generation, I don't know what the county holds for them."

Central Appalachia — covering portions of West Virginia, Kentucky, Tennessee and Virginia — was once the heart of U.S. coal. Its share of production halved in the past 15 years, and as the industry dissolved, the region became the epicenter of long-term idling. About half the country's 415 idled coal mines and related facilities, and half of those idled for more than three years, are located here, according to Public Integrity's analysis of federal Mine Safety and Health Administration data. That's likely an undercount, but state and federal data are incomplete and not often comparable.



Some wearing shirts that say "black lung kills," coal miners from Central Appalachia, many of whom suffer from black lung or silicosis, cheer during a meeting with senators and union representatives last summer on Capitol Hill.

Mark Olalde/Center for Public Integrity

Long-term idling brings huge layoffs. Coal mines and the plants serving them that have been idled for at least three years had 85 percent fewer full-time employees after switching into idle status than they did a year before, Public Integrity's analysis found. Management often promises that jobs will quickly return, miners say, encouraging workers to stay in towns with few other prospects.

This mainly happens in the East; out West, just eight coal operations sit idle, with only three workers still employed between them.

Union mines are not immune to idling and benefit losses, but some union contracts grant members call-back rights if their mines reopen and priority to transfer to other operations under the same owner, if not.

Glenn Sykes, a Vietnam veteran, spent 32 years mining Central Appalachian coal. Even though the industry was stronger then, Sykes wasn't a union miner, and whenever one job dried up, the company's support was "cut off right then. All my benefits were gone."

"They'd say this job was gonna last 20 years. You were lucky if it lasted three. I was always moving around from job to job," Sykes said. He has silicosis, a deadly lung disease likely caused by the fine dust kicked up in mines, and is fighting to preserve his benefits.



Alongside his wife Linda, Glenn Sykes, who spent 32 years as a coal miner in Appalachia, listens to senators and union representatives at a black lung roundtable in Washington, D.C. Mark Olalde/Center for Public Integrity

First in 1991 and again in 2011, Interior's Office of Surface Mining Reclamation and Enforcement, or OSMRE, proposed to write new rules to better regulate the practice. The first attempt was withdrawn a year later after the mining industry and several state agencies called it unnecessary. The second attempt was halted by the Trump administration.

Internal notes made by OSMRE staff in 2010, recently obtained by Public Integrity, showed that not-so-temporary closures were bedeviling regulators around the country. A survey sent to all state and federal agencies overseeing coal mining found that a majority "experienced problems administering temporary cessation. Most States believe there should be a maximum time limit."

The agency's Tennessee office told OSMRE officials, "The temporary cessation concept has been abused for years by operators desiring to retain viable permits but not conducting mining operations" and that efforts to compel either reclamation or mining "have failed for lack of ... clearly defined regulations or policies."

As the industry shrinks, long-term idling can be used as a stepping stone to forfeiture, passing cleanup responsibilities to the government and taxpayers. That may happen to some of Hoops' mines. As part of the bankruptcy proceedings, Hoops and his family walked away from most of their companies.



An unused coal preparation plant in southern West Virginia deteriorates.

Mark Olalde/Center for Public Integrity

Hoops specialized in scavenging, buying often unprofitable mines after a series of bankruptcies hit the country's largest coal companies in 2015 and 2016.

Twenty-one of his coal mines and related facilities were temporarily idled as of mid-August, according to Mine Safety and Health Administration data, seven of them for at least three years.

Potential buyers appeared interested last month in some of the mines owned by his companies in bankruptcy proceedings. But what would happen to the rest was unclear. If unpurchased, they would likely fall to states to reclaim — first with the inadequate funds companies set aside for that purpose, and after that with taxpayer money. At least 16 additional Central Appalachian operations owned by other companies in bankruptcy are idle.

"If you find a pair of safety glasses lying in the mud, if you need a pair, wipe them off and use them. If you need gloves, go buy your own. And if you didn't like it, go get another job."

Records from the Kentucky Energy and Environment Cabinet showed that more than 20 percent of permits idled in the state are tied to Hoops or were until July's bankruptcy. Cabinet spokesman John Mura said state legal staff is actively engaged in the bankruptcy proceedings, adding that the state is not concerned about temporary cessation because only 10 percent of Kentucky coal permits are currently idle.

Reached by phone, Hoops declined to comment. Numbers listed to Lexington Coal Co., where his wife Patricia is an executive, were disconnected.

About 1,100 Central Appalachian miners lost their jobs during the bankruptcy. Brandon Fleming, a Virginia miner who lived and worked not far from Harlan County, was one of several who said their employer sharply cut costs beforehand. Fleming said that workers were told: "If you find a pair of safety glasses lying in the mud, if you need a pair, wipe them off and use them. If you need gloves, go buy your own. And if you didn't like it, go get another job."

When he cashed what turned out to be a bad check from Blackjewel, his bank initially threatened legal action against him. He's since been given several months to pay the money back, money that he earned. Now he's working at a car dealership for half the pay and three times the commute.

"I've done lost just about everything, and the wolves are at my door," Fleming said. His wife's car was repossessed, and he couldn't afford to buy his fourth-grade daughter new school clothes. "It breaks my heart."



The office at one of the Sunday Mine Complex's five operations sits unused.

Mark Olalde/Center for Public Integrity

Paperwork shuffling

The calendar pinned to the wall read "April 2009," although it was actually May 2019 at the abandoned office of the Sunday Mine, 17 miles southwest of Naturita, Colorado. Cobwebs covered an empty desk in the next room, and paperwork spilled out of a box onto the dusty floor.

"This mine is not going to come back to life," Thurston, the activist, said as she viewed the mess.

The Sunday Mine is part of a complex of five uranium operations owned by Western Uranium & Vanadium subsidiary Pinon Ridge Mining. Now, president and CEO George Glasier, a titan of American uranium mining, hopes to restart them after years of idling.

Legal battles are being fought across the Uravan Mineral Belt in southwestern Colorado. Modern uranium miners, including Glasier, want to revive their operations, while Thurston, a mine watchdog with the Information Network for Responsible Mining, believes final reclamation should begin. As she whipped her car through the region's valleys, she noted with a flash of dark humor that she's stared at the same piles of waste rock her entire life.

In July, the Colorado Court of Appeals agreed with the environmental group in one case. A panel of judges ruled that the Van 4 mine — the old site above Paradox, near the Sunday Mine and also owned by Glasier — had overstayed its allotted time in temporary cessation.



Jennifer Thurston, an activist with the Information Network for Responsible Mining, tours the long-idled Van 4 mine. She won a court ruling in July that called for cleanup to begin.

Mark Olalde/Center for Public Integrity

In the Uravan Mineral Belt, 31 lease tracts managed by the Department of Energy cover about 25,000 acres. A federal court in Colorado lifted a long-standing injunction against new mining activity in March. Two months later, the mines were still far from production. At one called C-JD-5, equipment and buildings were badly damaged from years of theft.

Republican state Sen. Don Coram is part-owner of Gold Eagle Mining, which holds C-JD-5 and several other mines that haven't produced since he bought in more than 20 years ago. Over breakfast in May, he said it comes down to the markets.

"It's a big waiting game right now," he said.

C-JD-5 is "abandoned," according to federal Mine Safety and Health Administration data. But the Department of Energy considers it "actively leased." Colorado Department of Reclamation, Mining and Safety records show Coram switched the permit out of "final reclamation" in the most recent annual report.

That's why environmental activists call such operations "zombie mines" — it's impossible to say whether they're alive or dead.

Mining law's complexity makes this possible.

Coal mining falls under a federal law that mandates only that mining companies notify regulators when a permit will be in temporary cessation longer than 30 days. Twenty-one of the 23 states still producing coal wrote their own laws. But some barred themselves from enacting rules stricter than the federal government's, and most long-term idling occurs in those states.

The federal government leaves it to the states to impose limits on uranium-mine idling. The resulting patchwork of state rules are largely anchored on a 147-year-old federal law aimed more at promoting mining than managing it.

Over time, uranium production has dropped, stockpiles remained large, nuclear power's share of the country's electricity production fell, and power plants bought more uranium from overseas. Still, mine owners hope for a revival.

Uranium producers banked on a petition to Trump that would have effectively subsidized the industry by compelling 25 percent of uranium used in American power plants to be produced domestically. But in July, the administration announced that importing uranium didn't threaten national security, punting the question to a working group for further review.

While the industry awaits a decision, companies hold off on final reclamation. Groundwater monitoring at the Sunday Mine Complex has found heavy metals, although Glasier says the mine is above the water table and any water problems are naturally occurring.



Machinery sits idle in May at the Van 4 mine, the subject of a July court decision ruling that it must be shut down and cleaned up.

Mark Olalde/Center for Public Integrity

"Once you reclaim something, it's a lot harder to start it," Glasier said at his ranch, which covers tens of thousands of acres along the San Miguel River. The impressive home he purchased with the profits from a successful mining career stands at the end of a long tree-lined driveway. "Once you shut the industry down," he said, "it's going to take you 10, 15 years and a high price to bring it back."

Both Glasier and Coram believe another element might save their mines first. Vanadium, which often occurs alongside uranium in the Uravan, can be used in powerful batteries. Glasier believes his mines have high concentrations; he recently restarted sampling at the Sunday Mine Complex.

Neither man considers himself part of the industry's history of pollution. They said they would willingly begin reclamation when their temporary cessation permits run out, if uranium and vanadium prices haven't risen enough.

"The reason it got so messed up to begin with: It was totally the rush of the federal government," Coram said. "We were in a wartime situation and were going to produce this at all costs."



The Hobet 21 mountaintop removal coal mine, which leveled peaks in West Virginia, undergoes reclamation in 2017.

Mark Olalde/Center for Public Integrity

Cleaning up after the governor

As uranium mining pockmarked Colorado's valleys, the coal industry eviscerated low peaks and forests in the Appalachian Mountains.

"Remembering how it was and how it is is depressing as hell," said Bush, the former coal miner and mine inspector.

Except for time spent serving in Vietnam, Bush is a lifelong resident of southwest Virginia, where the commonwealth melts into Central Appalachian coal country. Area streams once teemed with minnows, he said. Now they're choked by silt running off unreclaimed mines.

He grew up hunting squirrels on a hill above his home, but a strip mine owned by West Virginia Gov. Jim Justice and his family now dominates the landscape. Today, Bush lives just up the road, where the hill above that home, too, has been leveled by a Justice operation.

"Remembering how it was and how it is is depressing as hell."

Both mines have sat inactive for years at a time, fouling local waterways. The U.S. Environmental Protection Agency and four states filed legal action in 2016 against Justice and his companies, listing thousands of violations relating to inadequate environmental monitoring and water pollution, including elevated levels of iron and manganese flowing from these mines.

Justice and his family idle more permits than any other U.S. coal mine owners, according to Public Integrity's analysis of federal data. Miles of ridgeline on the Virginia-Kentucky border lie barren after Justice mines went dormant.

It's difficult to separate the environmental and health impacts caused by idled mines from those triggered by active operations, said Emily Bernhardt, a professor at Duke University who researches human impacts on ecosystems. Modern surface mining in Central Appalachia has been linked to health problems ranging from cancer to birth defects. And in a 2012 study, Bernhardt estimated that surface mining impaired about one in three miles of southern West Virginia's rivers.



Acid mine drainage dyes a West Virginia waterway orange while coating the stream bed with heavy metals.

Mark Olalde/Center for Public Integrity

But idling poses other risks, Bernhardt said. When toxic waste piles — either solid rock or liquid confined behind earthen dams — are left unaddressed, the potential increases for "catastrophic failure," she said, even as opportunities to use the land for new purposes are delayed.

"You can't actually make any improvements when you're just on hold," she said. In Central Appalachia, tens of thousands of acres, mostly former forests, lie barren at these idled coal operations, according to a Public Integrity analysis of satellite data compiled by

environmental group SkyTruth. Communities that hope to grow outdoor recreation or other post-mining industries can't move forward.

Ransdell, the former Kentucky mine inspector, said regulators can reject applications for idled status if they catch noncompliance and ongoing pollution. But problematic mines can slip through the cracks. She recalled a permit in eastern Kentucky that was put into temporary cessation for a decade because its underground workings were on fire. And the longer that surface mines are left exposed, the more likely that acid will leak into waterways, ponds holding polluted runoff will overflow and massive waste impoundments destabilize.

"Coal companies know [long-term idling is] a viable option," Ransdell said. "It's something that can be abused easily because there are vague guidelines."

Thirty-three mines and a preparation plant owned by the Justice family's companies were idled as of mid-August, and 15 of them have been idled for at least three years, according to data from the federal Mine Safety and Health Administration. One mine in McDowell County, West Virginia — Justice's home state — has been paused since 2010.

And in Virginia — where two of his family's coal operations have been idled on and off since 1984 — the Justice companies have only one mine still producing. They're years behind on several of the original cleanup deadlines the state set.

"The end goal is to meet environmental obligations required by law in the state of Virginia, so we've given them dates and specific instructions of what needs to be reclaimed by when," said Tarah Kesterson, spokeswoman for the Virginia Department of Mines, Minerals and Energy.

Idling permits is "standard practice" in the industry, a spokesman for the Justice companies, Brian Walsh, said in an emailed statement. "The Justice companies are proud to be one of the region's leading job creators and environmental leaders within the coal industry" and have reclaimed several thousand acres in recent years, he said.

Regulators in Virginia have few options. Justice mine cleanup liabilities in Virginia total as much as \$200 million, and taxpayers could get stuck with a large share of that if the state takes over. That's because those companies have put up only about \$51 million for cleanup if the operations are abandoned. Half of that amount would likely be worthless in that scenario because, state records show, it is backed against the value of the companies. A pool of money Virginia set up to close gaps like this at 150 permits across the state, including some of Justice's, has less than \$10 million in it.

The state requires that mines covered by that shared funding pool increase the amount of money they set aside for reclamation once they're idled longer than six months. But funding shortfalls persist.

All told, nearly a third of permits in Virginia are in some degree of temporary cessation, according to Kesterson.

This makes Bush angry: It's created wastelands, he said.

An August visit to the Justice mine above his childhood home found reclamation still unfinished. Puddles dotted the site. Grass and weeds poked up through the exposed rock, in stark contrast to the lush surrounding forest. Near the treeline, a broken-down bulldozer sat abandoned, rusting.



A massive strip mine scars the Wyoming portion of the Powder River Basin, which produces more than 40 percent of the country's coal.

Mark Olalde/Center for Public Integrity