

How Anthracite Smothered Centralia, Pennsylvania

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Abstract

Underneath the long-abandoned streets of a remote Pennsylvania town, an inferno scorches the very earth. Centralia was once a booming mining community, but its history and legacy left it incinerated. A mine fire started in an old mining ditch would spread uncontrollably over the span of decades, causing the untimely end of the town. However, what really happened is not immediately clear, causing the story of Centralia to devolve into a confusing quagmire. Studying the intersection of governmental, social, and environmental historical evidence may unravel the mystery. This paper aims to elaborate on the history of Centralia and broader anthracite production, developing an argument that intertwines human industries and environmental traumas. It utilizes historical sources to analyze mining heritage and the emergence of environmental thought in relation to coal production. It excavates the true story of human lives in declining American communities as they contend with the permanent consequences of recklessly harvesting natural resources. Finally, it proposes that the tragedy of Centralia is vital to comprehending that human actions have intense ramifications on the planet when gone unchecked.

Anthracite coal is a rock composed of, on average, 86 percent carbon.¹ In contrast, diamonds

¹Donald L. Miller, and Richard E. Sharpless, *The Kingdom of Coal: Work, Enterprise, and Ethnic Communities in the Mine Fields*, (University of Pennsylvania Press, 1985), 5.

are almost 100 percent carbon. There is a mere 14 percent difference between the two minerals. It is no surprise then, that those who sat atop the miles of anthracite fields in Pennsylvania believed they were sitting on “black gold.” As such, from the middle of the nineteenth to the later decades of the twentieth century, a burgeoning anthracite industry was the main driving economic force in the region. But the price of extracting anthracite from deep beneath the earth’s surface was high. Furthermore, the eventual discovery of newer fuel sources elsewhere brought tremendous suffering to the coalfields. The people and places of the anthracite coal fields in Pennsylvania sacrificed a great deal of human life and permanently scarred the landscape they inhabited to make ends meet. This irreversible damage reared itself across the state. Populations declined, businesses left, and in some cases, the very earth itself was left diseased.

The most infamous anthracite town where this progression has taken place is Centralia. Factors of decline in the region severely affected this little place. The most dangerous: a mine fire that has been burning since 1962. In just shy of twenty years the mine fire in Centralia transformed the area from a hometown into a ghost town. Understanding what happened in Centralia requires a solid foundation in the history of the anthracite region in Pennsylvania and the story of the coal industry in America, as well as a comprehension of the fundamentals of the environmentalism movement nationwide. By then further analyzing documentation of government intervention and civil reactions to the mine fire tragedy disaster in Centralia, the picture of how this small town in Penn-

sylvania fell apart begins to come together. Centralia was smothered not only by the fire raging underneath it but also by the enveloping conditions constricting it, which did not allow the small town room to breathe.

Old King Coal

Centralia owed its existence to the larger coal industry in the area. The high amount of carbon within anthracite, when compared to other types of coal, made it appealing as a domestic fuel source. Anthracite's composition made it more difficult to ignite, but ultimately allowed it to burn longer and cleaner than other fuel sources.² To the early pioneers who settled the region, the rock was not particularly appealing, but with the birth of industrial processes in America in the nineteenth century, this changed. Anthracite coal began to draw crowds of self-made miners and larger companies to the area. These individuals sought to exploit the massive amount of coal that was contained beneath their feet.³ The demand for anthracite increased over time, and coal became fuel for further industrial expansion. In 1850, coal accounted for less than 10 percent of fuel-based energy in the United States. By 1900, this figure had soared to 73 percent.⁴ As the demand for anthracite increased, more workers were drawn to the area to make a living in this thriving market. Towns like Centralia were built to accommodate the growing population of workers and their families who had come to northeastern Pennsylvania for work.

Coal was such an integral part of the formation of these places. Duane Smith's book *Mining America: The Industry and the Environment*,

1800-1980 (1987) is a nationwide study on the effects of different mining industries on communities, which can be utilized to support conclusions about mining, environmental trauma and how they intersect with Centralia. While discussing how minerals have shaped America, Smith explains:

[T]hey reordered whole economies, reshaped deep-seated cultural and social patterns, redirected scientific and technological initiatives, redistributed military and economic might, refocused political power and international relations, and recast the health and fortunes of local communities and entire regions.⁵

This is the case with Centralia and the other "coal towns" that reside in Pennsylvania's anthracite fields. Societies have repeatedly relied on the Earth's store of natural resources throughout history to generate wealth. They often seek to exploit what they view as "untapped riches" for individual and collective gain. The extensive extraction of these resources was often done without either a full understanding or willful ignorance of ecological consequences.⁶ Finite resources create competitive and therefore profitable markets, but they always come with a sacrifice. Anthracite is no exception to this. Donald Miller and Richard Sharpless' *The Kingdom of Coal: Work, Enterprise, and Ethnic Communities in the Mine Fields* (1985) explores the history of anthracite in the region. They both postulate reasons for various historical events while exploring the various consequences that the industry wrought. As Miller reflects, "[n]o other American industry inflicted more heedless destruction on men and the environment than anthracite mining."⁷ The people of the anthracite fields in Pennsylvania gutted the mountains and valleys of this resource, changing it forever. This process, however, would forever

²Miller, *The Kingdom of Coal*, 5.

³Duane A. Smith, *Mining America: The Industry and the Environment, 1800-1980*, (University Press of Kansas, 1987), 407.

⁴Jacqueline Karnell Corn, "'Dark as a Dungeon': Environment and Coal Miners' Health and Safety in Nineteenth Century America," *Environmental Review: ER* 7, no. 3 (1983): 258.

⁵Smith, *Mining America*, 2.

⁶Smith, *Mining America*, 402, 407.

⁷Miller, *The Kingdom of Coal*, xxi.

change them in turn.⁸ Eager to profit from coal, mining projects removed massive amounts of rock from underground, putting the very structural integrity of the land at risk.

Usurping Anthracite

The consistent mining of anthracite was inevitably unsustainable for a multitude of reasons. Ben Marsh's "Continuity and Decline in the Anthracite Towns of Pennsylvania" (1987) as well as George Deasy and Phylis Griess' "Effects of a Declining Mining Economy on the Pennsylvania Anthracite Region" (1965), Benjamin Powell's "The Pennsylvania Anthracite Industry, 1769-1976" (1980) and Miller and Sharpless' book (1985) are all scholarly sources that specifically focus on the prolonged terminal decline that anthracite production had experienced in the region. By utilizing these sources, it can be surmised that anthracite permanently changed people and landscapes in Pennsylvania. The peak of the industry occurred during the 1920s when the population of the region was also at its highest. Anthracite production and employment were at an all-time high thanks in part to intervention from "big business, big labor, and big government" which had all interacted to manage the industry.⁹ Anthracite coal was toppled only a decade later due to outside economic forces that were uncontrollable. The Great Depression hit the market for anthracite particularly hard. During this time, the price of mining anthracite increased while the price for competitive fuel sources, such as oil and bituminous coal, decreased.¹⁰

Frequent strikes during these challenging

⁸Miller, *The Kingdom of Coal*, xxii.

⁹Ben Marsh, "Continuity and Decline in the Anthracite Towns of Pennsylvania, *Annals of the Association of American Geographers* 77, no. 3 (1987): 345; Benjamin H. Powell, "The Pennsylvania Anthracite Industry, 1769-1976." *Pennsylvania History: A Journal of Mid-Atlantic Studies* 47, no. 1 (1980): 4.

¹⁰Marsh, "Continuity and Decline," 345.

¹¹Miller, *The Kingdom of Coal*, 300.



Pennsylvania anthracite town Lansford during the Great Depression. Photograph from the Library of Congress.¹¹

times served to compact the issues the industry was facing. Work became increasingly rare, swelling rates of underemployment and unemployment. In some smaller towns, such as Centralia, this rate could be as high as 75 percent. Difficult conditions in the region sparked an exodus of people as early as the late 1920s. Numbers of emigrants fluctuated up through the 1960s. However, many Pennsylvanians did not have the financial means to leave. Many lower class people stayed, even as the industry faltered. By 1938, it was clear that anthracite coal mining was mortally wounded. Production was down to 46 million tons, and although the industry still employed around 100,000 people, the pay was a staggering 50 percent less than just ten years earlier.¹² The land was scarred, and the people were out of work and money. Anthracite as an industry had begun its steady decline into the ground.

As with elsewhere in the country, World War Two provided a brief period of relief with increased production and profit. Yields rose to 50 million tons in 1948, providing the region's inhabitants with work and capital.¹³ The growth of steel mills, an increased demand for exports, and the

¹²Miller, *The Kingdom of Coal*, 299, 311, 320.

¹³Marsh, "Continuity and Decline," 344.

consumption of coal at electricity plants alleviated other difficulties. Yet still, the problems anthracite had been facing did not disappear. Other obstacles began to surface and compound existing complications. The railroad industry switched to diesel engines, and unfavorable tax policies continued to hurt deeply.¹⁴ The biggest loss for the anthracite industry during this time was the emergence of domestic fuel alternatives. Consumer practices of the 1950s and 1960s heavily influenced the direction of the market. Oil burners, gas burners, and electric heat all became readily available as cleaner alternatives to coal, edging out anthracite as a staple in many homes.¹⁵ These trends would prove to further hamper any recovery the anthracite industry had hoped for in the middle of the twentieth century.

The dangers of unchecked exploitation in underground mines continued to damage coal production as well. Anthracite tragedies resulted in the devastating loss of human life and often rendered mine sites unusable. The anthracite industry was no stranger to them. Scholars pinpoint the 1959 Pittston mine disaster as a “nail in the coffin” for underground mining in Pennsylvania. Careless mining resulted in the Susquehanna River breaching the mine, taking lives, and resulting in the loss of the site.¹⁶ As a result, companies began to move away from deep mining for coal. This event, coupled with ongoing economic conditions in the region, reduced the industry to be “insignificant as a source of employment” and as a consequence, “the area had reached an acute stage of economic depression.”¹⁷ By 1974, only 80 deep mines remained in the area, and they only put out a mea-

ger 10 percent of the total coal produced by the state.¹⁸

People were aware of the dire situation anthracite production was in. Disgruntled Pennsylvanians often commented on these issues, which reveals coeval effects of this decline. In a article titled, “The Curse of Coal” (1973), Peter Bernstein complains:

Looked at another way, of the top fifteen coal producers, only three are independent. This means the coal industry is run by huge energy trusts that manipulate markets, create their energy crises, and have the power to open and close mines as it suits their needs.¹⁹

Bernstein highlights important statistics that can be used to make an inferences about anthracite output. Only one-fifth of the remaining companies remained independent and local, while the larger corporations who might not have had ties to the region controlled the rest. Damaged by events leading up to this point, the anthracite industry had begun to move away from Pennsylvania as a central focus. If there were companies that continued to deep mine, it was at a diminished level. This left the economy in the area weakened. The loss of deep anthracite mining brought a new low to people throughout the region.

A Brief Backup: Strip Mining

The industry, much like the rugged and economically marginalized people of the region, managed to find new ways to combat dwindling output and declining employment. While underground mines may have become only a fraction of anthracite production in the region, innovations in heavy machinery proved useful with the advent of strip mining. Strip mining entails digging shallow trenches in the Earth to mine at any mineral

¹⁴Chad Montrie, “Expedient Environmentalism: Opposition to Coal Surface Mining in Appalachia the United Mine Workers of America, 1945-1975,” *Environmental History* 5, no. 1 (2000): 81.

¹⁵Powell, “The Pennsylvania Anthracite Industry,” 24.

¹⁶Powell, “The Pennsylvania Anthracite Industry,” 23.

¹⁷George F. Deasy, and Phyllis R. Griess, “Effects of a Declining Mining Economy on the Pennsylvania Anthracite Region,” *Annals of the Association of American Geographers* 55, no. 2 (1965): 242.

¹⁸Powell, “The Pennsylvania Anthracite Industry,” 23.

¹⁹Peter J. Bernstein, “The Curse of Coal,” *Nation* 217 no. 6 (1973): 168.

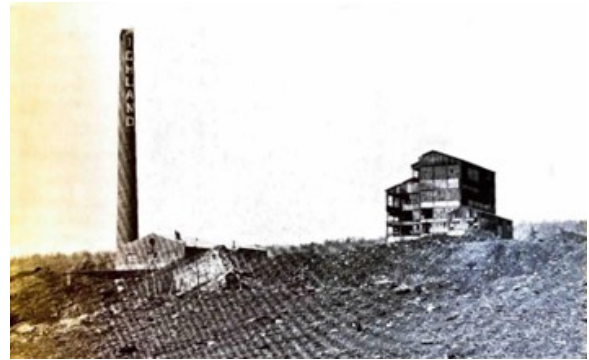
deposits located close to the surface. This new method of anthracite production was less labor intensive, needed fewer people to operate, and could be done quickly. As such, strip mining was safer, but more importantly, cheaper. Still, this practice was not without its sacrifices.

Strip mining was more immediately environmentally disastrous. Thousands of acres of land and water were polluted or otherwise mutilated as heavy machinery chipped away at the very topography of the region. Beyond this, strip mining served to displace people from their homes and push them off their land.²⁰ Hence, for anyone who was not benefiting from such destruction, strip mining became a target of disdain and protest. The movement against strip mining was local. People stood together to save their homes most of all, but there was also an emerging drive to preserve the environment and conserve natural resources.²¹ Eventually, federal legislation such as the Federal Coal Mine and Safety Act of 1969 placed restrictions on strip mining by increasing operation costs and enforcing new health and safety regulations.²² These new policies would once again undermine further industrial development, as they did little to aid the issues that anthracite coal had been facing. While rallying cries may have succeeded in slowing the spread of strip mining, people soon found themselves exactly where they were.

A Grim Diagnosis

In the early 1980s, Centralians were facing their biggest hurdle, but little was developing elsewhere. In 1984, by the time Centralia had been on fire for 22 years, only 3.5 million tons of anthracite were produced.²³ The largest anthracite employer in the region only employed 400 people.²⁴ The industry was effectively dysfunctional and was only

at a minute fraction of its capacity due to circumstances within and outside of its reach.



An abandoned anthracite coal breaker. Photograph by Dan Rose.²⁵

It is important to understand the decline of anthracite in Pennsylvania because it demonstrates that places like Centralia and the people who inhabited them were already severely struggling to hold on. According to Deasy and Griess (1965), “Increasing economic and social dislocations” marked Northeastern Pennsylvania, which further resulted in an “exodus” of people from the land and therefore a loss in workforce numbers. This outward movement of people was mostly younger, as they sought jobs in other markets. Older people either did not want to leave because of social ties or did not have the financial means to do so. This exodus proved to further damage the people remaining in the region. Fewer people meant a lower tax base from which public funding could pull to provide services and facilities.²⁶

Such developments have resulted in experts claiming a poor prognosis for anthracite’s redevelopment. Even if mining were to resume, there are presently no solutions to the issues coal has historically faced. Regardless, despite the population of the area being only one-third of what it was in 1920, the residents of the Pennsylvania anthracite fields hold on to what ties they still have.²⁷ These

²⁰Bernstein, “The Curse of Coal,” 170.

²¹Montrie, “Expedient Environmentalism,” 84.

²²Powell, “The Pennsylvania Anthracite Industry,” 25.

²³Marsh, “Continuity and Decline,” 344.

²⁴Miller, *The Kingdom of Coal*, 323.

²⁵Miller, *Kingdom of Coal*, xxi.

²⁶Deasy, “Effects of a Declining Mining Economy,” 239, 242, 253.

²⁷Marsh, “Continuity and Decline,” 350, 337.

ties are what make the remaining communities so strong, and, as will further be explored, function as a glue to keep people together, for better or for worse, through related trauma.

Environmentalism in Coal Kingdom

As previously mentioned, the decades that encompass the decline of the anthracite industry in Pennsylvania also see the rise of a new method of ecological thinking that would reconsider humanity's relationship with their natural environment. Aptly named environmentalism, the ideology has its roots in earlier twentieth-century efforts to "conserve natural resources, preserve wilderness, and reform the urban-industrial environment." A modern form of environmentalism emerged following the Second World War as a mostly anthropocentric response to "new interest in quality-of-life issues," "material affluence," "increased leisure time," and better education. These all brought new values into politics.²⁸ This translated into a focus on issues that threatened the human status quo. Early environmentalists strived for the preservation of natural resources for human consumption.

How coal and people interacted in the broader context of the environment is discussed in Scott Dewey's "Working for the Environment: Organized Labor and the Origins of Environmentalism in the United States, 1948-1970" (1998) and Chad Montrie's "Expedient Environmentalism: Opposition to Coal Surface Mining in Appalachia the United Mine Workers of America, 1945-1975" (2000). Both sources also research the origins of eco-theories in anthracite and contextualize Centralia as a part of a larger picture of environmental degradation and economic decline in the area. In the case of anthracite, environmental concerns were focused on air and water pollution, specifically how to reduce the health issues that miners and communities faced.²⁹ As with other move-

ments, this resulted in a push to preserve jobs and employees rather than to save the land that was actively being destroyed. Activists targeted health conditions like black lung disease (pneumoconiosis), and even so, these efforts aimed to provide employee compensation rather than disease prevention.³⁰ This is because these anti-pollution, pro-health messages were never really framed contemporaneously within the context of environmentalism. These were simply concerned people who began to question their safety after years of minimal regulation and maximum environmental damage. Blue-collar workers originally considered environmentalists as elitists who stood against economic growth and opportunities.³¹ People who lived in the anthracite region tended not to structure their arguments for change around the consequences of mining on the land.

Instead of seeking solutions for the pollution they saw, most people decided that these issues were the responsibility of local and state agencies, which either were nonexistent or ineffective.³² Scott Dewey, who explores the relationship between labor and environmentalism, suggests that:

[M]any people believed that environmental cleanup and protection could be achieved without major economic dislocations or fundamental changes in the suburbanized, auto-based, consumeristic postwar American culture. But with skyrocketing energy costs, general inflation, and economic stagnation, workers who had once anticipated an improving standard of living and a shorter work week [were] now increasingly worried about keeping their jobs at all.³³

nized Labor and the Origins of Environmentalism in the United States, 1948-1970," *Environmental History* 3, no. 1 (1998): 46.

²⁸ Montrie, "Expedient Environmentalism," 76, 79.

³¹ Dewey, "Working for the Environment," 45.

³² Dewey, "Working for the Environment," 48.

³³ Dewey, "Working for the Environment," 58.

²⁸ Montrie, "Expedient Environmentalism," 77, 75.

²⁹ Scott Dewey, "Working for the Environment: Orga-

Towns in the anthracite region were barely surviving the slow decline of one of their major markets, yet people expected governments to provide solutions to coal pollution that would burn immense amounts of money from already limited funding. These agencies left people feeling abandoned after little was done to help them economically and environmentally. Environmental conflicts revitalized ongoing disputes between people, companies, and the government.³⁴ These tensions intensified a sense of distrust between small communities and outside presences, which hampered relationships. As a result, little was done initially to aid the region, and when action had to be taken, such as in Centralia, no one could clear their heads of smoke and move past their differences. Anthracite, impartial to these quarrels, would only continue to damage the land.

Decades of Devastating Damage: The Problem of Mine Fires

Decades of mining and producing anthracite for sale had left the Earth tired and weak. As companies went under or merged due to broader economic change, human activity permanently altered the land. Anthracite operations ravaged 121 square miles or 774,400 acres in Pennsylvania.³⁵ A few sources can be used to inform on the dangers of this loss, including the dangerous effects of mine fires. Of note is Jacqueline Corn's "Dark as a Dungeon: Environment and Coal Miners' Health and Safety in Nineteenth Century America," (1983) Scott Fields' "Air Pollution: Underground Fires Surface," (2002) and Kevin Krajick's "Fire in the Hole" (2005). For instance, it is true that groundwater pollution was a serious consequence of deep mining, as iron and sulfate acidified the drinking water and undermined infrastructure in the region. Coal slag also tarnished water resources in the area and contributed to respiratory illnesses. The constant usage of coal for decades

resulted in substantial amounts of sulfur dioxide and carbon dioxide being released into the atmosphere. These emissions posed hazards to people's well-being. Unregulated strip mining created deep pits that contoured the land and displaced enormous amounts of soil.³⁶ Deteriorating mine supports led to subsidences in the rock, which would sometimes give way to sinkholes and endanger people and their homes.

The biggest consequence of anthracite mining is mine fires. Started for any number of reasons, these infernos rage underneath the surface and compound and complexify many of the side effects of coal.³⁷ These fires are long-term, persistent issues that do not disappear without an incredible human effort to subdue them. Centralia historians J. Stephen Kroll-Smith, and Stephen Robert Couch's article, "A Chronic Technical Disaster and the Irrelevance of Religious Meaning: The Case of Centralia, Pennsylvania," (1987) helps contextualize the mine fire disaster in a broader technical spotlight. According to the authors, they are "disaster agent[s]" that "upset balance" and "require[-] sophisticated tech[nology] to detect and abate."³⁸ The only evidence of these catastrophes is the occasional "eerie" trickle of thick, "acid" white smoke billowing from below.³⁹ As the small town of Centralia would learn, anthracite fires burn hot and slow.

The damaging and damning legacy of anthracite mining is evident in mine fires like the one burning under Centralia. A report from the U.S. Department of the Interior, Bureau of Mines

³⁴Smith, *Mining America*, 133.

³⁵Miller, *The Kingdom of Coal*, 323.

³⁶Marsh, "Continuity and Decline," 346; Smith, *Mining America*, 399; Scott Fields. "Air Pollution: Underground Fires Surface," *Environmental Health Perspectives* 110, no. 5 (2002): A234; Montrie, "Expedient Environmentalism," 82.

³⁷Kevin Krajick, "Fire in the Hole." *Smithsonian.com*, (May 1, 2005), 1.

³⁸Stephen J. Kroll-Smith, and Stephen Robert Couch, "A Chronic Technical Disaster and the Irrelevance of Religious Meaning: The Case of Centralia, Pennsylvania," *Journal for the Scientific Study of Religion* 26, no. 1 (1987): 27.

³⁹Miller, *The Kingdom of Coal*, xix.

titled *Problems in the Control of Anthracite Mine Fires: A Case Study of the Centralia Mine Fire* (1980) provides useful information concerning the origin and history of Centralia and the mine inferno while also positing methods of resolving the town's problems. This information is invaluable when analyzing the harrowing tale of the inferno that beset the small town.

The Centralia mine fire is in the Western Middle Field, an anthracite field that spans 94 square miles.⁴⁰ The fire itself is raging on an eight-mile stretch of anthracite that encompasses some 3,700 acres. Estimates suggest that the fire may burn for another 250 years before it runs out of fuel.⁴¹ The geography of the area is conducive to the fast spread of the conflagration. The anthracite fields in the state are not entirely flat, and their pitch is a crucial factor in the spread of underground fire, as these angles allow for the circulation of air and flames. As time progresses, fire may move from one coalbed to another. Thermal energy, with nowhere else to go, is also preserved for years at a time. Heat serves as insulation for mine fires—even when the temperature drops low, anthracite can be reignited and continue to burn. This creates perfect conditions for an indomitable blaze.⁴² To further complicate this, burning coal turns to ash, creating space for subsidences to strike and for airflow to circulate.⁴³ Anthracite fires can spread far and burn for an incredibly long time. They easily fuel themselves and, because of their immense temperature and undiagnosable reach, present numerous dangers to the areas in which they arise. These characteristics influence how people approach mine fire manage-

ment.

The nature of anthracite fires makes them difficult to control. From 1950 to 1980, the Bureau of Mines was involved with 26 mine fires at 17 separate sites in the Pennsylvanian anthracite fields. Only slightly more than 50 percent of these efforts were successful.⁴⁴ Each fire is unique, which means there is no single solution to them. Varying factors must be considered while developing a plan to deal with a blaze. The immediate threat to the environment, proximity to people, geographical conditions, such as the pitch and thickness of the coalbeds, and the history of mining in the area must all first be recognized before an effective mix of strategies can be identified.⁴⁵

Pennsylvania's landscape ensures that mine fire control is expensive and arduous. The U.S. Department of the Interior Bureau of Mines considers this, postulating:

In some cases, these fires have outlasted repeated control efforts for more than a decade or recurred after they were thought to be extinguished. As the area and intensity of a fire increase, so do the potential hazards to the environment, property, and in particular, to the health and safety of nearby inhabitants.⁴⁶

This does not mean that there are no effective ways to control a mine fire, and the phenomenon is by no means a new issue to coal production and has been studied since the nineteenth century, as evident with the early twentieth composition, "The Problem of Mine Fires" (1924).⁴⁷ In the case of Centralia, a few methods were considered. Loading out involves a full excavation of

⁴⁰John T. Schimmel, Wilbert T. Malenka, Ann G. Kim, Bernice S. Heisey, Robert J. Brennan, and Robert F. Chaiken, *Problems in the Control of Anthracite Mine Fires: A Case Study of the Centralia Mine Fire (August 1980)*, (Avondale, Md.: U.S. Dept. of the Interior, Bureau of Mines, 1983), 4.

⁴¹Krajick, "Fire in the Hole," 1.

⁴²Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 9-12.

⁴³Krajick, "Fire in the Hole," 2.

⁴⁴Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 16.

⁴⁵Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 6.

⁴⁶Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 2.

⁴⁷"The Problem of Mine Fires," *Scientific American* 130, no. 3 (1924): 172.

the burning material and extinguishing it. Inundation floods or continuously pumps water deep into the coalbeds with the hope of lowering temperatures enough to extinguish flames and prevent their reignition. Flushing fills underground voids with noncombustible materials or a slurry mix to seal the area away. Fire barriers can be built in advance to halt the advance of a mine fire and theoretically isolate the source. Surface sealing plugs areas that may provide fires with ventilation to smother their oxygen supply.⁴⁸ No one of these methods is infallible and they all have their advantages and drawbacks.

Dealing with mine fires is an extremely expensive race with the clock. Most of these control methods are either wildly expensive, meaning anthracite towns cannot afford them, or they take too long, allowing the fire to spread beyond the control efforts. The Bureau of Mines in Pennsylvania had spent a total sum of 37 million dollars in successful mine fire control efforts by 1980. Even if efforts were deployed, monitoring them was guesswork at best, as the fire was only observable through drilling boreholes. In towns that sit upon vast labyrinths of now-defunct mines, there is no way to certainly tell if a fire has been extinguished.⁴⁹ Direct control efforts are only effective where fires are small, accessible, and measurable. This does not mean larger fires can be allowed to burn indefinitely. Mine fires are environmental catastrophes that endanger entire communities for a myriad of reasons.

The biggest immediate effect of anthracite fires is on people. Mine fires are potentially fatal because they can trigger surface fires or create deep subsidences, as well as harm people's health. The most serious of these issues, according to the Department of the Interior, is:

[T]he presence of hazardous combustion gases which have migrated into area

⁴⁸Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 7-8.

⁴⁹Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 16, 10.

homes through fractures in the strata overlying the fire. In this region, many towns and cities overlie abandoned underground workings. Although there is little risk of fire on the surface, the gases from the fire are a serious hazard to public health and safety.⁵⁰

Mine fires increase the frequency of health-related issues among communities within their proximity. Gases that seep up from underground blazes gather in homes and endanger people where they are supposed to feel safe. Carbon monoxide is a colorless, odorless gas that replaces oxygen in blood and causes respiratory failure.⁵¹ James Logue, Robert M. Stroman, and Kandiah Sivarajah (1991) explore the many adverse effects of the mine fire on local populations in "The Centralia Mine Fire: An Overview of Community Health Surveillance Efforts," which shows how impactful the disaster was. They explain that other byproducts of coal fires are soot, compounds of sulfur and nitrogen, and arsenic, fluorine, and selenium. Additionally, noise and vibration from the fire or control efforts can also cause health problems.⁵² Extended exposure to particulates has been associated with arsenicosis, fluorosis, lung cancer, hypertension, arthritis, as well as other respiratory and gastrointestinal diseases. Also dangerous are mental health problems such as stress and depression. According to a study, residents of Centralia suffered from these ailments more than those of Marion Heights, a nearby town unaffected by the fire.⁵³ Living above a mine fire is inherently dangerous beyond a doubt. There are inevitable risks

⁵⁰Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 18.

⁵¹Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 18.

⁵²Krajick, "Fire in the Hole," 3; James N. Logue, Robert M. Stroman, and Kandiah Sivarajah, "The Centralia Mine Fires: An Overview of Community Health Surveillance Efforts," *Journal of Environmental Health* 54, no. 1 (1991): 22.

⁵³Fields, "Air Pollution," A234; Logue, "An Overview of Community Health Surveillance Efforts," 22.

that come with the choice to remain above an ecological disaster. Why Centralians remained for as long as they did, then, comes into question.

Mine fires consume already exhausted reserves of anthracite and have historically prevented industry development and staggered economic growth. They economically and ecologically taxed areas that had already been restricted by larger symptoms of the decline of anthracite. People have long been the victims of these problems. Residents of Pennsylvania were forced to grapple with economic strife, health concerns, and ecological devastation for generations. Mine fires are chronic tragedies that bring past traumas to the surface, even if people try to bury their history. Centralia, the most infamous case of decline in the region, exemplifies the painful struggle with the environment, economy, and in the end, the legacy of people and coal.

The Town of Centralia

Centralia was a town surrounded by stories, both real and imagined. It was a typical rural Pennsylvanian town, one of many anthracite towns that occupied the northern coalfields. It was founded and grew with the local anthracite industry, which brought work to its population. Anthracite, from the very inception of the town until its final days, was at the center of Centralian livelihood. Centralia, like many other towns in the region, was built upon people's relationship with coal. This is evident in the stories, old and new, which are all a part of Centralia's history and folklore. Fueled by coal, these stories—of people, community, industry, environment, and tragedy—are what makes Centralia fascinating as a case study of the region. Renee Jacobs' *Slow Burn, a Photodocument of Centralia, Pennsylvania: Photographs and Text* (1986) aims to archive contemporaneous anecdotes about the fire through testimony and photography, while also providing historical subtext on the event. Although it was published after the relocation of most of Cen-

tralia's residents, Jacobs was able to live alongside the townspeople while the town still existed, providing an interesting perspective on their final days as a community. Jacobs' dedication to documenting the story of Centralia makes her book an essential component to understanding what unfolded there.

There is one particular old folk tale that comes from Centralia that has become legendary among locals and scholars like Jacobs (1986), about a priest and the Molly Maguires, a legitimate "labor gang" that often committed violent crimes in the middle of the nineteenth while the anthracite industry was in its infancy. The legend claims that a local priest denounced the organization's behavior during a preaching service. As revenge, while the priest was peacefully praying in the cemetery, some Molly Maguires beat him senseless. In return, the priest cursed the town, declaring that Centralia, "founded on a bed of coal, would burn forever."⁵⁴ While the authenticity of this tall tale is questionable at best, it demonstrates a rich connection between coal and folklore. This proves that Centralia has always had a contemporaneous history with the rise and decline of the anthracite industry in Pennsylvania.

The Bureau of Mines document (1980) provides an overview of Centralia's history. Centralia was originally called Bull's Head when people first settled there in 1841. This founding populace consisted of mostly miners, who had been extracting anthracite from nearby deposits. Eventually, as more people began to build homes and work mines, Bull's Head grew into Centerville, and then Centralia, which was officially incorporated as a Pennsylvania borough in 1866. The anthracite industry blossomed in the town because of the arrival of the Lehigh and Mahanoy railroads in 1865. Three collieries, the Centralia Colliery in 1862, Continental Colliery in 1863, and Locust Run Colliery in 1867 all brought new work opportunities

⁵⁴Renee Jacobs, *Slow Burn, a Photodocument of Centralia, Pennsylvania: Photographs and Text*, (University of Pennsylvania Press, 1986), xvi.

and drew in even more people.⁵⁵ At the beginning of the twentieth century, Centralia was booming with business, and its prospects looked favorable. Unfortunately, as occurred with anthracite towns elsewhere, this prosperity was only temporary.

Centralia's population became large during the height of anthracite demands, but as with other towns in the region, it declined with economic stagnation. The Lehigh Valley Coal Co. operated the Centralia mine until 1925 when it closed. During the Great Depression, miners desperate for work would often illegally excavate anthracite, jeopardizing already damaged mine structures. "Third mining" removed important foundational pillars that kept the roof of the mine stable. The Centralia mine reopened in 1935 as the Centralia Mining Co. but attempts to revitalize major operations failed. From there, mining rights passed from company to company, until mining operations finally ceased in 1963. These later companies employed strip mining frequently due to the increased costs of deep mining. This ruined stretches of land in and around Centralia, leaving behind deep trenches that exposed veins of anthracite.

The Origin of the Fire

The Bureau of Mines report (1980) provides an in-depth description of the origin of the fire. A certain pit, mined near the town cemetery in 1935 by operator Ed Whitney, was abandoned and subsequently repurposed as a municipal waste area that the town would periodically incinerate. This pit was connected through subsidence to the Buck Mountain Coalbed. In 1962, flames from a controlled burn of trash spread from the strip mine pit into this coalbed, starting the Centralia mine fire. Small at first, this conflagration would grow large enough to cost millions of dollars, threaten two towns over 140 acres of land, and eventu-

ally smother Centralia altogether.⁵⁶ The legend of the priest's curse would return to haunt the residents of this coal town. Unluckily, it was Centralians themselves that created the inferno that would burn them out of existence.

Before this happened, however, the Centralia mine fire would rage for more than two decades. During this time, both the town residents and officials who oversaw control efforts would labor to comprehend and address the fire that raged beneath them. The conflicts that stemmed from dissenting opinions surrounding the fire fanned flames between people and created deep divisions.



An aerial photograph of smoke in Centralia.⁵⁷

Town residents discovered the fire shortly after it began in May of 1962. Borough workers doused the pit with water and clay to attempt to blanket the fire. Firefighters who first responded to the site were still unaware of the full reach of the affected area, conceiving it to be contained to the pit. By July of the same year, it was clear that the fire was not going to be put out easily. Dense fumes were emitting from the ground, and the fire had already moved 200 feet, a considerable distance for an anthracite fire in such a short amount of time. The township realized that the issue was severe, and that action needed to be taken without delay.⁵⁸ The mine fire would prove to be an

⁵⁵Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 21.

⁵⁶Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 21, 9-10, 2.

⁵⁷Jacobs, *Slow Burn*, 2.

⁵⁸Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 21, 23.

engineering and economic nightmare for the area. No one was sure of where the fires extended to, and townspeople were deeply concerned about the plumes of smoke that had become a part of their daily lives.

There were immediate consequences to the mine fire that complicated initial efforts to control it. Fumes and carbon monoxide spread underground quickly, entering the active mine sites of Coates Coal Co. and other independent companies, making them entirely unsafe to operate. Pennsylvania ordered the closure of 23 mines, putting 140 workers out of work.⁵⁹ The mine fire further inhibited the anthracite industry in the region, causing people to lose their income. While it is part of a bigger picture of economic decay, the mine fire was costly for the state. Preliminary projects were deemed the responsibility of Pennsylvania, and the state went forward without seeking outside aid. The first large-scale attempt to extinguish the fire was an excavation that lasted from August to October of 1962. 30 thousand dollars later, funding had dried up and work stopped, and soon after the fire was detected outside of the excavation zone. More funds were not immediately available to kickstart another project, which allowed the fire to burn further. The next attempt to control the mine fire started in July of 1963 and continued through October of 1963 when the fire was detected past the incomplete trench that was being dug.⁶⁰ Having spent close to 100 thousand dollars on projects, Pennsylvania began to look to the federal government for help.

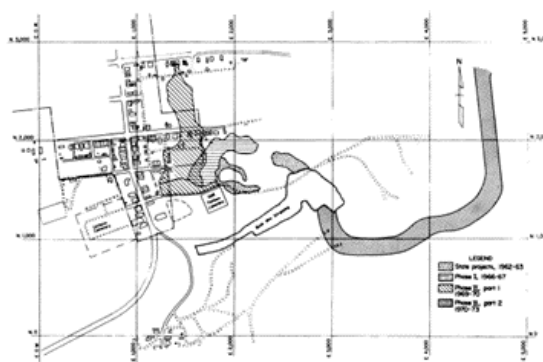
Seeking Solutions for Centralia

Their chance would come two years later when Congress passed the Appalachian Regional Development Act of 1965. This law provided public works and economic development plans for the

⁵⁹Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 24.

⁶⁰Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 25.

region, including aid for land that was impacted by previous mining. Pennsylvania submitted a massive project plan the same year, and in June of 1965, a 2.5-million-dollar mission was approved for federal funding. The joint federal and state contract was signed in July of the following year, and work began in November of 1966. The project was divided into two phases. Phase I would back-fill and seal any remaining strip mine pits to prevent oxygen flow. Phase II involved constructing a permanent isolation trench to restrict the area the fire would burn in away from the town.⁶¹



A combined map displaying Phase I and II of the 1965 plan.⁶²

Work on this project extended for seven years, until December of 1973. During that time, 1,635 boreholes were drilled, 122,556 tons of fly ash (a flushing material) were pumped underground, and 2.7 million dollars were spent. Constant delays resulting in slow progress doomed this massive project. Soon after it was completed, elevated temperatures and carbon monoxide from the mine fire were discovered in boreholes past the exclusion trench. Further projects continued through the latter half of the 1970s, but none reached the scale of this effort again.⁶³ Both the state of Pennsylvania and the federal government

⁶¹Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 27.

⁶²Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 33.

⁶³Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 31.

had exhausted allocated funds, and their failure to control the disaster was demotivating. Towards the end of the crisis, the government, while still present, was hesitant to act decisively. The people of Centralia, however, had no choice about whether they could worry about the fire raging underneath their homes.

The Toll of a Slow Burn

The slow burn of the Centralia mine fire was incredibly disastrous to the people who lived in the town and had been there for generations. Historical sources such as the Bureau of Mines report (1980) and Logue, Stroman, and Sivarajah's study (1991) reveal how smoke slowly smothered Centralia. They make it apparent that the fire and government responses to it disturbed the quiet "normal" that many had become accustomed to in the lull that the anthracite industry left. Residents of the town were aware of the semi-frequent excavation projects that went on, but went about their daily lives, powerless to stop the smoke and fire. There were a few incidents that reminded people of the present danger they were in, causing many to be concerned for their safety. In May of 1969, state mine inspectors detected unsafe levels of carbon monoxide in three homes, which forced these families to vacate. In 1976, a borehole was found emitting twenty times the fatal amount of carbon monoxide, causing alarm. In 1979, ground temperatures at a gas station became hot enough to jeopardize underground gasoline storage tanks. In 1980, the government purchased seven properties in the town legally through the 1977 Surface Mining Control and Reclamation Act, which permitted the government to purchase property as a part of emergency land reclamation projects. This made other residents defensive of their homes. As time progressed, more people reported becoming ill, and Centralia locals demanded solutions.⁶⁴

⁶⁴Kroll-Smith, "A Chronic Technical Disaster," 29; Logue, "An Overview of Community Health Surveillance Efforts," 21.

The Bureau of Mines addressed this by installing carbon monoxide detectors in homes. They performed weekly monitoring tests to check for gas seepage to ensure resident's safety. Otherwise, the Department of Health also participated in local meetings and committees dedicated to the fire.⁶⁵ To reduce the amount of toxic gas entering homes, officials dug at least 1,800 boreholes to carry fumes above the town.



A borehole emitting toxins from the mine fire.⁶⁶

To Centralians, these tall, metal poles surrounded by chicken-wire barriers became a sullen reminder of the "ubiquitous, silent enemy that threatened to destroy the town."⁶⁷ The initial response to Centralia remained regional. The mine fire was an issue between people, Centralia, and larger government entities, but otherwise stayed irrelevant to people unaffected by the flames.

A Subsidence Becomes a Sensation

This would not be the case for long. A watershed moment in Centralia's story occurred in 1981, garnering national attention and causing a massive influx of press in the area. While he was playing with his cousin, pre-teen Todd Domboski noticed smoke coming from the ground in

⁶⁵Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 32; Logue, "An Overview of Community Health Surveillance Efforts," 21.

⁶⁶Jacobs *Slow Burn*, 6.

⁶⁷Jacobs, *Slow Burn*, xiii.

his grandmother's backyard. Investigating what he believed to be a small brush fire, Domboski instead discovered a subsidence that grew into a sinkhole underneath his feet.⁶⁸ Reflecting on that February day, twelve-year-old Domboski recalled:

I grabbed onto some roots and was screaming for my cousin. I couldn't see him; there was smoke everywhere... It smelled like sulfur. It was unbearably hot, and it sounded like the wind howling down there.⁶⁹

The hole that swallowed Domboski was hundreds of feet deep, and, if he had fallen, he would not have survived. This near-fatal accident drilled the severity of the fire raging underneath people's feet and forced people to stop ignoring the disaster as it unfolded. The Domboski subsidence split town opinions on the fire. Twenty years of continued government activity with no real, tangible proof of progress divided the town on whether the fire was even real. The town was separated into "hot and cold sides," depending on if a family's home was above the danger zone or not. Some simply believed the whole thing was a hoax (although smoke was ever-present), while others petitioned for a permanent solution, either through ending the fire or relocation.

People began to argue whether the health and safety issues the town faced were even legitimate, and some believed that the danger from toxins and subsidence was highly exaggerated.⁷⁰ Divisions worsened over conflicts surrounding the fire, and relationships between neighbors as well as compliance with government officials soured. Public meetings became war zones where citizens became hostile towards each other and the governments. The Bureau of Mines became a "bunch of lying bastards" who were to blame for

their failures to stop the fire. Crime rates increased—firebombing, tire slashings, and threats of violence and vandalism terrorized Centralia. Evidence of worsening conflicts is proof that the mine fire caused immense stress throughout the entire community.⁷¹ Press sensationalism only compounded these issues, and people were tired of constant problems in their daily lives. The mine fire took an extensive toll on Centralians.

Smothering Centralia with Smoke

Regardless of what people believed, Centralia became socially and physically ill as the fire worsened underneath them. This became so evident that Centralians became frequent subjects of examinations. Findings of these inquiries can be found in such articles as the New York Times, "Poor Health Linked To Blaze in Centralia," (1986). Studies like these done on the town show that people whose homes were above the fire were less healthy than "cold zone" residents, but also that Centralians were generally less healthy than other residents of nearby towns.⁷² Centralian Mary McGiley complains about the problems people were experiencing:

Most people in Centralia have black lung and other lung diseases. I have asthma and it's real hard on me. I ended up in the hospital in intensive care with gas in my lungs. It took five days to get it out.⁷³

Health scares and hospital visits became common among locals, and people often suffered from a greater number of health issues. A 1984 study from Pennsylvania State University demonstrated that Centralians frequently faced "respiratory and gastrointestinal diseases, hypertension,

⁶⁸Jacobs, *Slow Burn*, xiii.

⁶⁹Jacobs, *Slow Burn*, 9.

⁷⁰Jacobs, *Slow Burn*, xii; Marsh, "Continuity and Decline," 349.

⁷¹Marsh, "Continuity and Decline," 349; Kroll-Smith, "A Chronic Technical Disaster," 29.

⁷²Logue, "An Overview of Community Health Surveillance Efforts," 22.

⁷³Jacobs, *Slow Burn*, 17.

depression, and anxiety” and went further to suggest that these problems were caused not only by the fumes from the mine fire but also by the huge amount of stress people had to deal with.⁷⁴ Stress was also listed as a hazard to residents along with age and carbon monoxide in a 1982 position paper from the Department of Health.⁷⁵ The blaze made people sick or otherwise unhealthy.

Following Domboski’s fall into the subsidence, the intensity of community conflicts caused massive stress. Community ties unraveled despite the best efforts to maintain relationships, and the town opened its first mental health clinic.⁷⁶ Another resident, Joan Girolami, remembers:

I was smoking more than I ever was at the end there, I was so nervous. I was taking so many nerve pills I didn’t know whether I was coming or going half the time... I got an ulcer, ended up having a lot of problems with my marriage, and a lot of problems with my kids.⁷⁷

The Centralia mine fire was burning away any idea of a united Centralia, while also making its citizens physically sick. The stress incurred from the disaster became nightmarish for many, who could no longer bear the weight of the anthracite fire anymore.

Centralia’s Conundrum: How Citizens Responded

The Centralia mine fire was devastating to individuals who called the town their home, and people reacted in several ways. Analyzing contemporaneous personal testimony provides insight into how chronic disasters influence people and can further be used to explore how these traumatic events relate to the history of regions. Cen-

⁷⁴“Poor Health Linked To Blaze in Centralia,” *The New York Times*, (February 7, 1986).

⁷⁵Logue, “An Overview of Community Health Surveillance Efforts,” 21.

⁷⁶Jacobs, *Slow Burn*, xiv.

⁷⁷Jacobs, *Slow Burn*, 129.

tralain Joseph Smolock, while discussing relocation, shared his personal belief that, “everyone has that little voice inside that tells them what’s right and wrong, and if I leave I’ll be going against what my voice tells me is right—my heritage, my past, and my soul.”⁷⁸ Smolock communicates similar sentiments with other people in the Pennsylvania anthracite region. The region, despite economic and ecological decay, represents a long-running history of people. This manifests itself in a nostalgia that ties people to the land, discouraging the idea of leaving what little is left, all that these individuals have ever known, behind. This contributes to the constant defense that Centralians express for their homes.

People, connected not only physically but spiritually to the town, chose to stand beside it despite the fire. Residents to Save the Borough of Centralia was a group devoted to defending the town against perceived threats. An informational piece they put out explains their frustrations:

Six years of meetings, studies, surveys, engineering evaluations, borehole analyses, relocation projects, referendums, petitions, mind-manipulating tactics, exploitation by every conceivable source and still the root of the problem remains ignored. Since 1978 nothing has been done to prevent the effects of the mine fire from threatening our communities, a mind-boggling blatant violation of our right to life, liberty, and the pursuit of happiness. We cannot help questioning the integrity of government agencies who consistently ignore these rights and allow this farce to continue.⁷⁹

Organizations like Residents to Save the Borough of Centralia are evidence of resistance towards outside influences beyond Centralia’s immediate control. Battling against perceived “enemies” emboldened these groups, who believed

⁷⁸Jacobs, *Slow Burn*, 12.

⁷⁹Jacobs, *Slow Burn*, 30.

they were standing for justice. Since individuals could not solve a disaster as large as the mine fire, government lobbying became the focus of these groups, although their negative attitudes towards these institutions persisted. In another informational piece, the Residents to Save the Borough of Centralia write, “We do not appreciate being harassed by the news media and government officials trying to relocate people and use the land for their gain... The danger to our town has been grossly exaggerated!”⁸⁰ Centralians insisted that the lack of immediate solutions was a symptom of government negligence, refusing the burden that many felt should not be on their shoulders.

Many of the reactions to the Centralia mine fire read similarly. People were frequently upset by the fire, the government, and each other. Cooperation between people became minimal, and fingers were often pointed, constructing an “us versus them” narrative. Helen Womer firmly asserted how “The fire has not destroyed this community. The government has. Sensationalism by the press has. Radical elements within our community have—people who had access to newspapers and television stations.”⁸¹ Denying any responsibility for the issues that Centralia was facing may have been an attempt to relieve the weight of stress off of people’s shoulders. There is some truth to this defense. Press sensationalism fanned the flames of these conflicts.

Environmentalists also became integrally involved with Centralia during this time, usually standing against the government. Locals were concerned about the land far less than they were about the remaining anthracite deposits, but they let activist messaging inspire their arguments. Lois Gibbs, the famous Love Canal activist, commented on Centralia, orating that:

[T]here’s no way the ‘scientists’ are objective with all these dollar signs looking them in the face. You have to re-

alize the bureaucrats initiating the studies are also going to be paying for the resolution to the problem. The same is true from universities doing studies, because their funding usually comes from the state or corporations.⁸²

Irrespective of Gibbs’ best intentions as an activist, charged language only added to the discord the town was experiencing, and solidified hard divisions that would only prove to harm the town, hampering any chance of peace. While everyone was outraged, the mine fire continued to burn.

Not everyone became so actively involved in the efforts, although they may have still suffered the consequences of the fire. The life the fire had made for them simply defeated many. Constant construction and scientific monitoring, as well as media sensationalism, were wildly invasive to these people who were exhausted and at their limit. While discussing the presence of carbon monoxide detectors in her home, Chrissie Kogut explains, “I was never scared because they were all false alarms, except maybe once or twice when the gases were high, We’d just let it go off. You get used to it, even when the gases are high. You’ve gotta die sometime.”⁸³ Such resignations are more than enough to portray the fatigue in Centralia. People, numb to the mine fire after decades of related problems, simply began to give up. If they chose to remain in town, they often accepted that nothing would improve, even to such extremes as Kogut did.

Eventually, even those who fought valiantly to save their homes were tired. Joan Girolami recalls how “I had to admit that I was carrying a lot of hate around in my heart. We didn’t start the fire, but we got blamed for it. The hardest thing about counseling was admitting that we just had to quit.”⁸⁵ Centralians, struggling against one another and against what seemed like everyone else,

⁸⁰Jacobs, *Slow Burn*, 43.

⁸¹Jacobs, *Slow Burn*, 81.

⁸²Jacobs, *Slow Burn*, 87.

⁸³Jacobs, *Slow Burn*, 99.

⁸⁴Jacobs *Slow Burn*, 56.

⁸⁵Jacobs, *Slow Burn*, 133.



A Centralian's plea for help.⁸⁴

could not continue forever. The fire was still burning, and all neighbors had accomplished was turning friends into enemies. It seemed to many residents that Centralia was hopeless against the still-raging inferno.

The Final Years of a Town

By 1980 Centralia was at a crossroads, and the next few years would embody a desperate struggle for survival. Ecologically and economically damaged, people continued to look to the government for answers, despite the disdain towards officials. Conversely, the government continued to look for a solution to the mine fire, albeit slowly. The Bureau of Mines report (1980) provides background information on the blaze which it then incorporates into considerations for the town's future. It recognizes the failures of past attempts, even suggesting that some control efforts may have contributed to the propagation of the fire. Yet still, it stresses the seriousness of the fire and suggests that action needs to be taken. 1,500 acres of land, 24 million tons of coal, and some 320 homes, businesses, and public facilities would be sacrificed if nothing were done.⁸⁶ The report also shows a preferred interest in mobilizing another massive development project to extinguish the fire, or at least

⁸⁶Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 33, 35.

stop its spread.

TABLE 13. - Categorized options

Option	Category ¹	Estimated cost, millions
Excavation:		
Plan A.....	3	\$84
Plan B.....	1	42
Plan C.....	1	23
Plan D.....	1	33
Flushing:		
Plan A.....	2	26
Plan B.....	2	25
Burnout control.....	2	(²)
Underground mining...	3	³ 21
Relocation of community.....	3	(²)
Flooding.....	4	(²)
Water curtain barrier	4	³ 20

¹1--Proven method; 2--developmental method; 3--prohibitive; 4--scientifically unsound.

²Not estimated.

³Includes \$10 million for excavation of trench barrier along south dip.

A table summarizing planned project costs.⁸⁷

Government officials carefully considered the benefits and drawbacks of a variety of plans, including control methods such as flooding, excavation, flushing, and even total community relocation. It was understood that because the fire had been burning for almost two decades, any plan would "result in a major effort, a major expense, and/or a major impact on the community" and that the "effect on the financial stability, employment, and social life of the town will be relatively great."⁸⁸ Complete excavation of the fire was priced at around 84 million dollars, a massive amount of money. Even cheaper plans were priced at no less than a couple of million dollars. The 1980 report made it clear that, costs aside, the fire needed to be addressed. Centralia was in critical condition.

⁸⁷Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 71.

⁸⁸Bureau of Mines, *Problems in the Control of Anthracite Mine Fires*, 70, 73.

An answer finally came in July of 1983, 21 years after the fire began in the strip mine pit on the outskirts of town. The U.S. Department of Interior had concluded that the mine fire was “terminal.” The fire was growing faster than originally thought, and the risk it posed to the town was at an all-time high. The government decided that relocation was the only viable long-term solution to the mine fire, and ordered the townspeople out of their homes, providing an additional 42 million dollars to purchase property. The news that Centralia would no longer exist devastated people. A few people resisted the announcement and decided to stay in their homes, but most accepted the money and relocated to nearby towns. Demolition of uninhabited homes began in December of 1984.⁸⁹ Helen Womer shared her feelings, lamenting, “They’re going to go through, seeing their neighbor’s homes, memories, as though the house was once alive and it is slowly being killed.”⁹⁰ Centralia was no more, and the “spirit” of the town and community died with it. Both Centralians and the government accepted there was no feasible solution to the chronic issue they had tried to combat for so long.

The Department of the Interior conducted a follow-up health survey in 1984 and 1985 to support their decision for relocation, and upon analyzing its results, found that people’s health was improving elsewhere. While the government was able to justify their actions, relocated people had no choice but to accept that the fire had changed their lives forever. For the people who chose to remain, acceptance meant continuing to carry the burden of the fire indefinitely, with no discernible future in sight. In 1962, 500 families called Centralia home. In 1987, when the last health report was released on the townspeople, 50 families remained above the fire.⁹¹ Decades later, the number has only dwindled. According to the 2020 cen-

sus, 4 people remain in Centralia.

Comprehending Centralia in Context

The mine fire continues to burn years after turning Centralia into a ghost town, left to its own devices underneath the surface. It, as well as the town, will burn out eventually, although estimates on both vary. Still, the story of Centralia from the beginnings of its inception as a small miners’ town, through the highs and lows of the anthracite boom and bust, and to its end through a persistent ecological disaster provides insight into the very nature of the people of the region and how they interact with the land. Industrial societies constantly overuse finite resources, and such behaviors often have dire consequences. Donald Miller writes, “Anthracite’s final legacy is a warning to all Americans that human lives and natural resources are finite and precious, that they can no longer be sacrificed indiscriminately on the altar of private greed.”⁹² Unregulated, aggressive exploitation of the natural world comes at grave human costs. Centralia’s end is the culmination of over a century of this heedless behavior, and the social and physical deterioration that people were forced to experience is the result. The land was tired and permanently changed, and a lack of a strong economy prevented any restitution for the area. No matter how resilient people truly were, the countless hours spent trying to control the fire at both the local and governmental levels proved to be fruitless as personal divisions destroyed any opportunity to unify. The fumes from the flames smothered these people of vania anthracite region, after decades of surviving on the fringe.

The Centralia mine fire became a symptom of a larger trend that has been repeated elsewhere throughout the United States and even worldwide. Industries have repeatedly exploited the land for financial gain, destroying people’s homes for private profits. When they leave, they leave behind a scarred and depressed landscape, and the people

⁸⁹Jacobs, *Slow Burn*, 54, 144.

⁹⁰Jacobs, *Slow Burn*, 146.

⁹¹Logue, “An Overview of Community Health Surveillance Efforts,” 21-22.

⁹²Miller, *The Kingdom of Coal*, 324.

of the region must face the repercussions of their actions. Centralia is a case study of the hubris of humanity when it comes to the environment, and it should be remembered as a story of caution as environmental issues become increasingly frequent.

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