AFD Ep 445 Links and Notes - Superfund Sites and Mine Reclamation [Bill/Rachel] - Recording Oct 23, 2022

- [Intro]
- https://en.wikipedia.org/wiki/Surface_Mining_Control_and_Reclamation_Act_of_1977
    - As strip mining for coal became more common in the 1930s and the demand for coal during WWII spurred widespread mining with little regard for the environmental impact, the question of what to do with the land once all the coal was mined became unignorable. States did attempt to address the issue by placing their own regulations, such as requiring mining companies to post bonds to fund land reclamation after mining is completed, but laws were inconsistent from state to state. Mining companies who didn't like the regulations would simply move operations to states with less stringent laws on the books. Meanwhile, the problem continued to grow; by 1973, a whopping 60 percent of American coal came from strip mining.
    - In the mid-1970s, Congress attempted to address the issue by sending federal mining regulation bills to President Gerald Ford, but Ford feared that regulating the industry would be bad for business, the economy, and the energy supply so he vetoed any bills that crossed his desk. Jimmy Carter, on the campaign trail during the 1976 Presidential race, made stump speeches in Appalachia promising to sign those bills. In January 1977, just a couple weeks after Carter was inaugurated, Rep. Morris K. Udall introduced a bill in the house, and on August 3, 1977, Carter signed into law the Surface Mining Control and Reclamation Act of 1977.
    - There are 5 major components to the law:
        - *Performance Standards - SMCRA and its implementing regulations set environmental standards that mines must follow while operating, and achieve when reclaiming mined land.*
        - *Permitting - SMCRA requires that companies obtain permits before conducting surface mining. Permit applications must describe what the premining environmental conditions and land use are, what the proposed mining and reclamation will be, how the mine will meet the SMCRA performance standards, and how the land will be used after reclamation is complete. This information is intended to help the government determine whether to allow the mine and set requirements in the permit that will protect the environment.*
        - *Bonding - SMCRA requires that mining companies post a bond sufficient to cover the cost of reclaiming the site. This is meant to ensure that the mining site will be reclaimed even if the company goes out of business or fails to clean up the land for some other reason. The bond is not released until the mining site has been fully reclaimed and the government has (after five years in the East and ten years in the West) found that the reclamation was successful.*
        - *Inspection and Enforcement - SMCRA gives government regulators the authority to inspect mining operations, and to punish companies that violate SMCRA or an equivalent state statute. Inspectors can issue "notices of violation," which require operators to correct problems within a certain amount of time; levy fines; or order that mining cease.*
        - *Land Restrictions - SMCRA prohibits surface mining altogether on certain lands, such as in National Parks and wilderness areas. It also allows citizens to challenge proposed surface mining operations on the ground that they will cause too much environmental harm.*

    - The SMCRA also created an Abandoned Mine Land fund that was to be used for mines that were abandoned prior to the Act's passage in 1977. The law was later amended in 1990 to allow funds to be used for mine reclamation of mines abandoned after 1977. A tax on coal is used to pay for the fund: originally it was 31.5 cents/ton of surface-mined coal, 15 cents/ton of underground-mined coal, and 10 cents/ton of lignite. These rates have been reduced over time to 22.4 cents/ton of surface-mined coal, 9.6 cents/ton underground-mined coal, and 6.4 cents/ton of lignite. Eighty percent of the fund goes to the states with an approved reclamation program to fund their reclamation activities; the remaining 20 percent is used for emergencies (e.g. landslides, land subsidence and fires), and for high-priority cleanups in the two states without an approved reclamation program (Tennessee and Washington). AML funds can also be used by the states to create insurance programs for homeowners who may be affected by land subsidence caused by underground mining.
    - SMCRA uses a cooperative federalism approach to enforcement. As long as state programs meet or exceed the federal standards, and have the resources to administer and enforce their programs, the states are allowed to run their own programs (i.e. issue permits and inspect mines). As stated previously, all but two states with active coal mines have approved state programs. In Tennessee and Washington, as well as on Indian Reservation land, the Office of Surface Mining performs all regulatory functions. The federal government also is required to regulate surface coal mining on federal lands (including 60 percent of coal reserves in the West), but they are allowed to enter into cooperative agreements with states with approved programs.
    - In 1981, *Hodel v. Virginia Surface Mining & Reclamation Association, Inc.*, a group of coal producers tried to challenge the SMRCA on the grounds that it violated the 10th Amendment. The Supreme Court ruled that it did not violate the Commerce Clause and it didn't interfere with States' function of regulating land use.
    - One major weakness of how the Act is enforced by state-run programs is the allowance of mining companies to hold their assets as bonds, which is known as "self-bonding". When mining companies declare bankruptcy, they can no longer pay for reclamation efforts as required by law. As of 2016, mining companies have put up $3.7 billion in assets in self-bonds. One company, Peabody Energy, held $1.47 billion in self-bonding liabilities when they declared bankruptcy in April of 2016.
- https://en.wikipedia.org/wiki/Mine_reclamation
    - When mining ends, the reclamation stage begins. Firstly, operators must return the land to its Approximate Original Contour, or grade the land for a "higher and better" post-mining land use that is included in the mining permit application. The dominant approach to mine reclamation is the Forestry Reclamation Approach. Under this approach, forests are used to rehabilitate the land. First, at least 4 feet of good rooting material must be laid down, made of topsoil, weathered limestone and/or the best available materials. Then the material is graded to create a non-compacted growth medium. Finally, groundcover and trees are planted on the land. Successional species that are chosen for wildlife and soil stability are planted first, then commercial crop trees are planted.
    - When forests are not appropriate for the local climate, mining lands can be converted to rangeland instead. Under this approach, the topsoil is still built up and graded, but rather than trees being planted, native successional plant species are planted instead, such as grasses. Livestock are introduced to

complete the ecosystem and fill the niche that native grazers occupy. As the ecosystem matures, native animals may either return naturally, or through reintroduction efforts. As native species proliferate, livestock can be reduced or removed entirely.

- https://en.wikipedia.org/wiki/Superfund
    - The Problem: Highly toxic industrial plants (or their off-site toxin dump sites) with air, water, and ground contamination were beginning to close down in the 1970s from a combination of growing environmental safety pressure as the effects on nearby human populations were becoming clearer, and we've also talked on other episodes about how this era sees the beginning of global economic pressures to close down certain factories in the US. So what is to be done when a company pulls up stakes, or shutters completely and files for bankruptcy, leaving behind a highly contaminated piece of land or nearby waterway filled with chemicals that will never break down or dissipate?
    - The Solution (that got selected): The US government opted to pass a law creating a so-called "Superfund," which could be used to clean up and mitigate these major post-industrial contamination sites, and it would be funded through a combination of taxes on certain categories of polluter companies (especially oil and chemicals) and contributions by the US government on its own. That way if a company refused to take responsibility for a site after closing a plant (or even no longer existed in many cases), there would still be a source of money and a responsible authority for trying to clean it up.
    - This law was one of the final Carter Administration things (signed December 1980 as he was leaving office), really weak to begin with, and immediately undermined by Reagan and then Clinton/Congressional Republicans. From the mid-90s until the Biden Administration, over 25 years later, there were no taxes at all on the polluting companies to pre-fund their own anticipated later cleanups. The government funding, by the early 2000s the only source of funds at all, was wholly insufficient to the number of sites and scale of the cleanups needed.
    -
    - Sometimes the EPA spends money to relocate an entire community of hundreds of families away from a Superfund site because of how badly contaminated it is. However, according to the EPA history of the law on their website (linked below), these re-locations were never made for Black communities until 2009. In that case, in a neighborhood of Pensacola Florida at a former Wood Treatment facility, it was decided that nothing could really be done about the soil except to dig it up temporarily, build a containment cell, and then put the soil back in and leave it there, permanently toxic. So, the people had to be moved instead.
- https://www.epa.gov/superfund/superfund-history-printable-version (abridged quotes below)
    - *It's easy to forget that there was a time in the United States when EPA lacked the legal authority to clean up hazardous waste sites like Love Canal, New York, or to respond to emergencies such as train derailments involving dangerous chemicals. Even though the EPA had been established for ten years, it was not until December 11, 1980, that President Jimmy Carter signed into law the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund). This historic new statute gave EPA the authority to clean up uncontrolled hazardous waste sites and spills.*
    -

- *1979: House and Senate committees hold extensive hearings on the dangers posed by toxic waste dumps and major bills are introduced to create a 'superfund' for dealing with these dangers in both houses of Congress.*
-
- *1980: Toxic waste bursts into flames at a waste storage facility in Elizabeth, New Jersey, sending a thick black plume of smoke and ash over a 15-mile area and raising fears of widespread chemical contamination. The fire burns for 10 hours as State officials issue an environmental advisory closing schools and urging residents to close all doors and windows and remain indoors.*
-
- *Congress passes the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) to address the dangers of abandoned or uncontrolled hazardous waste dumps by developing a nationwide program for: emergency response; information gathering and analysis; liability for responsible parties; and site cleanup. CERCLA also creates a Trust Fund (or 'Superfund') to finance emergency responses and cleanups.*
-
- *1982: EPA publishes the Hazard Ranking System (HRS) as the principal mechanism for evaluating environmental hazards of a site. HRS is a numerically-based screening system that uses information from preliminary investigations to assess the potential threats that sites pose to human health or the environment.*
-
- *EPA issues first national guidelines for implementing CERCLA in its revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The NCP sets forth the procedures that must be followed by EPA and private parties in emergency responses and cleanups.*
-
- *1983: Using the HRS screening system, EPA creates the first National Priorities List (NPL), classifying 406 sites as the nation's priorities for cleanup under Superfund. Only sites on the NPL may qualify for long-term remedial actions financed by the Superfund. The NPL is updated on a regular basis.*
-
- *1984: Concerns about gasoline and hazardous chemicals seeping from storage tanks and landfills into underground drinking water supplies prompt Congress to enact the Hazardous and Solid Waste Amendments to RCRA under which EPA makes efforts to prevent such contamination and requires the treatment of hazardous waste prior to land disposal.*
-
- *A toxic gas release in Bhopal, India, kills 3,800, raising public concern about explosions and leaks of toxic chemicals. This incident led to the passage of the first community right-to-know law under the 1986 Superfund Amendments.*
-
- *1986: The Friedman Property site in New Jersey becomes the first site deleted from the NPL.*
-
- *Congress passes the Superfund Amendments and Reauthorization Act (SARA), which in part: strengthened CERCLA's enforcement provisions; encouraged voluntary settlements instead of litigation; stressed the importance of permanent remedies and innovative treatment technologies; increased state involvement in every phase of the Superfund program; increased the focus on human-health*

problems posed by hazardous waste sites; and encouraged greater citizen participation in how sites are cleaned up.

-
- *SARA added certain specific provisions to CERCLA that were applicable to the cleanup of contaminated sites at federal facilities. Under CERCLA Section 120, federal agencies are required to comply with CERCLA in the same manner and to the same extent as non-governmental entities. Section 120 also requires federal agencies to identify contamination affecting contiguous or adjacent property, compile information about contaminated sites at federal facilities and enter the information into the Federal Agency Hazardous Waste Compliance Docket, and promptly conduct preliminary assessments, remedial investigations, and feasibility studies at federal facilities.* [This consideration of federally-owned contamination sites would become even more important a few years later when US military bases begin closing down in significant numbers as the Cold War comes to an end.]
-
- *1993: The Brownfields Initiative is launched to redevelop abandoned, idle, or underused industrial and commercial sites when expansion or redevelopment is complicated by real or perceived environmental contamination.*
-
- *1994: The OSWER Environmental Justice Task Force is created to address concerns over the unequal distribution of environmental threats in disadvantaged and minority communities in EPA's waste programs.*
-
- *1996: Cumulative Superfund cost recovery settlements exceed $2 billion. Over 20 percent secured in 1996 alone. This landmark accomplishment demonstrates EPA's commitment under the Superfund Reforms to promote enforcement settlements so responsible parties pay for cleanups.*
-
- *1999: EPA announces the Superfund Redevelopment Initiative, a coordinated national program providing communities with the tools and information needed to turn cleaned up Superfund sites into productive assets like office parks, playing fields, wetlands, and residential areas.*
-
- *2000: After a ten-year, exhaustive scientific study of the contamination of the Hudson River from polychlorinated biphenyls (PCBs), EPA proposed an extensive plan to clean up the river and protect public health. The cleanup would remove over 100,000 pounds of PCBs that would potentially contaminate people, fish, and wildlife through the food chain.*
-
- *2011: The National Bureau of Economic Research study, "Superfund Cleanups and Infant Health," (http://www.nber.org/papers/w16844) shows that investment in Superfund cleanups reduces the incidence of congenital abnormalities in infants by as much as 25 percent for those living within approximately 2100 yards of a site.*
-
- *2014: A study (http://www.sciencedirect.com/science/article/pii/S0095069612001167) by researchers at Duke and Pittsburgh Universities found that once a site has all cleanup remedies in place, nearby property values reflect a significant increase as compared to their values prior to the site being proposed for the NPL.*

Cleanups also increase tax revenue for local communities and state governments, including helping to create jobs during and after cleanup. For example, at 450 of the 800 sites supporting use or reuse activities, EPA found, at the end of fiscal year 2014, that there were ongoing operations of approximately 3,400 businesses, generating annual sales of more than $31 billion and employing more than 89,000 people.

- Conclusion: Superfund Cleanups are the consequences of the industries that were started during the Second Industrial Revolution: a lot of the Superfund sites are those refineries & chemical plants of the New Jersey/Pennsylvania area that we talked about in our episodes on the 1870s-90s, and this is the early neoliberal solution to the problem a century later.