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The Upper Big Branch Mine Explosion: Occupational Hazard or Preventable Tragedy; A Look at State-Corporate Crime

Cassandra Tate
Eastern Kentucky University

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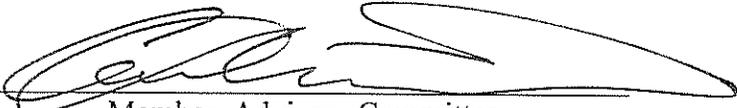
By

Cassandra Tate

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The Upper Big Branch Mine Explosion: Occupational Hazard or Preventable Tragedy; A
Look at State-Corporate Crime

By

Cassandra Tate

Master of Science
Eastern Kentucky University
Richmond, Kentucky
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Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements
for the degree of
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DEDICATION

This thesis is dedicated to my grandparents
Sam and Eleanor Humphries
for their unwavering support and guidance

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Abstract

Corporate crimes, defined as “illegal and harmful acts committed by officer and employees of corporations to promote corporate interests,” have a greater impact on society than many street crimes. Corporate crime includes a range of white-collar crimes that affect employees and consumers. White-collar and corporate crimes are often ignored by the media unless there is involvement in some high profile scandal. There tends to be a paucity of research associated with coal industry related corporate crimes. This includes personal and death related events in the coal mining industry. This was evident in the 2010 explosion at the Upper Big Branch Mine in Montcoal, West Virginia that resulted in the death of twenty-nine miners. The goals of this thesis include the examination of how the Upper Big Branch Mine disaster was represented by various institutions, including governmental agencies. Included are explanations of how Massey Energy corporate officials violated safety regulations and permitted the continuous operation of a mine that have been previously cited for numerous safety violations. Ultimately, a position is presented that the injurious and harmful actions of Massey Energy Corporation officials was criminal as opposed to a preventable accident.

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Chapter One: Introduction

Corporate crimes, defined as “illegal and harmful acts committed by officers and employees of corporations to promote corporate interests,” (Friedrichs, 1996, p. 9), or crimes of the powerful, have a far greater impact on society than that of many common street crimes. Corporate crime can come in many different forms, including blackmail, bribery, embezzlement of funds, and forgery of documents. Several of these forms of corporate crime can be seen in the Enron scandal of 2001, where corporate executives misrepresented company earnings, while encouraging employees to invest in the company stock. In the end, this resulted in shareholders losing millions of dollars. In addition, corporate crime can affect employees who work for a corporation and consumers of any product that might be produced. Finally, corporate crimes can lead to severe environmental harms, such as those associated with the BP Oil Spill of 2010.¹

Even so, white-collar and corporate crimes are often ignored by the media, unless they involve a high profile scandal of some sort. As such, many people, including some criminologists, do not perceive such acts as threatening or harmful to their own personal safety. The media is more interested in reporting cases of “serious” or “violent” crime that involves dramatic, sentimental, whimsical, or unusual elements. And by focusing on these types of crime over others, the media is involved in “constructing” the typical views

¹ In addition, corporate crime often is intertwined with what scholars of state crime call "state-corporate" crime, meaning the ways that the state often colludes with corporations in the production of social harm and organizationally criminal behavior. This often involves the state institution failing to prevent organizational harm through absent or lax regulation, or the active encouragement of criminally or socially injurious by state and corporate entities.

of crime and criminals: minority, particularly blacks, lower class, and possibly suffering from some form of mental health issue (Robinson, 2011). Reiman and Leighton (2013) identify the typical criminal in the popular imagination as male, young, predominately urban, disproportionately black, and poor. And unlike most street crimes, which target certain individuals, virtually every person has been affected by some form of white-collar or corporate crime. For example, every tax-paying American saw his/her tax debt increase as a result of the savings and loan scandal (Lynch et al., 2004).

In addition, the overall cost associated with white-collar and corporate crime is substantially more than street crime. Several researchers have estimated that the annual losses from white-collar crimes are approximately \$200 billion to \$400 billion per year (Albanese, 1995, p. 85; Lynch, Michalowski, & Groves, 2000, p. 60). Thompson (1992), for example, notes that in 1992 the cost of healthcare fraud alone by health care professionals was \$100 billion annually. In comparison, the total loss from conventional street crime is approximately \$5 billion per year on the low end (Calavita & Pontell, 1990, p. 309) to \$10 billion at the high end (Albanese, 1995). These figures indicate that the financial cost of white-collar and corporate crime far exceeds the costs associated with street crime by a factor of twenty to forty times, or more.

Furthermore, the costs associated with white-collar and corporate crime are not measured solely in financial terms. Research indicates that corporate crime also results in a very high degree of mortality. On average, there are approximately 20,000 homicides in the United States each year. In comparison, Simon (1982) estimates that roughly 100,000 people die each year in the United States from illnesses and injuries contracted on the job, while another 390,000 are disabled because of occupational diseases. In

addition, Reiman and Leighton (2013) have determined that between 12,000 and 16,000 people die each year from unnecessary surgeries, while an additional 20,000 deaths can be attributed to a failure to provide adequate medical care. Countless other deaths can be credited to corporate manufacture and sale of unsafe and dangerous products, including automobiles, pesticides and unsafe working conditions (Lynch et al., 2004). These figures, when taken together, suggest, that corporate crimes place many more people at risk of death or injury than street crime (Lynch et al., 2004).

Corporate Crime in Coal Mining

White-collar and corporate crime is largely underrepresented and researched, particularly in relation to the occupation of coal mining. With an overwhelming amount of the research in coal mining focusing on the environmental issues, the issue of worker safety is almost non-existent throughout the literature (Stretesky & Lynch, 2011). This is a significant exclusion based on the large number of injuries and even death within this occupation. A study by the National Institute for Occupational Safety and Health (NIOSH) found that between 1986 and 1995, over 130,000 on the job injuries were reported to the Mine Safety and Health Administration (MSHA). Of those injuries, almost 52,000 involved some type of musculature sprain or strain. In addition, almost 1,500 workers were crushed, while 247 reported injury from an electric shock. Finally, 701 workers between 1986 and 1995 incurred some form of chemical burn (NIOSH, 2000). Despite the numerous federal and state laws enacted throughout the years, mine owners continue to consider the safety of their workers a low priority (Simon, 1982). This is made quite evident by the fact that since 1900, nearly 100,000 miners have died while on the job. NIOSH (2000) reported that between 1986 and 1995, 511 fatalities

occurred in coal mines. Of those fatalities, 141 occurred while using or operating tools or machinery and almost 100 occurred during vehicle or transportation operations. In addition, over 40 fatalities were the result of some form of electrical accident. NIOSH (2000) also reported that between 1992 and 1995 of the 168 fatal injuries that occurred, 35 coal miners died after being caught in or crushed by collapsing material. That number does not, however, include the more than 1,500 (mostly retired) miners that die every year in the United States from black lung disease, contracted through exposure to coal dust (Goodell, 2006).

Worker safety, particularly in the coal mining industry, is an issue that needs increased and continuous attention. A coal miner needs to feel safe and protected each and every time he or she goes to work – a responsibility that falls on the shoulders of the top officials of coal mining companies. While avoiding one hundred percent of accidents and injuries is nearly impossible, in certain cases, the large number of deaths can be prevented by following all safety guidelines and laws and using properly maintained equipment.

Research Question and Methodology

In 2010, an explosion ripped through the underground Upper Big Branch Mine in Montcoal, West Virginia, taking the lives of twenty-nine miners. This thesis aims to examine how the Upper Big Branch Mine disaster was represented by different institutions, including the state of West Virginia, as well as different media accounts. It will analyze both the strengths and weaknesses of the accounts from these different institutions and describe how each of them interpreted this tragic event – often in a way that obscures alternative ways of understanding this explosion.

In order to accomplish this, this thesis, like previous research examining state-corporate crime, utilizes a case study approach. Specifically, this thesis employs what Stake (2000) calls an instrumental case study, where a particular case is examined to provide insight into a larger issue or context. In order to collect data, I have used what Altheide (1996) calls “theoretical sampling.” This refers to the selection of materials based on emerging understanding of the topic under investigation (Altheide, 1996). This has allowed me to collect the data that I believe, based on the specific research questions guiding this inquiry, provides me with the best insight into this particular case. Ultimately, the data discussed here comes from government reports, such as McAteer and colleagues Report to the Governor, and various media reports discussing the Upper Big Branch Mine explosion. The Report to the Governor is the primary way in which the Upper Big Branch explosion was understood and reported following the explosion – hence the report is widely accepted as *the* official, authoritative account of this tragedy.

The beginning steps of my research involved identifying and locating any article I could on the Upper Big Branch Mine disaster. Using multiple databases and resources, I developed several key search words that allowed me not only to find very broad general articles on the topic, but specific documents pertaining to investigations following the disaster. By using this method of theoretical sampling, I ensured that I had a wide range of material including government documents and different news media accounts of that day, as well as images and statements from the families and friends of the miners who died in the explosion. This approach has allowed me to examine the discourse used throughout the investigations following the explosion, while paying particular attention to ways different institutions and actors labeled the explosion –such as an “accident”,

“tragedy”, “disaster”, or as a “crime” – issues that I will discuss in more detail in subsequent pages.

The intertwined questions guiding my analysis of this data are the following: How was the explosion understood by the investigating committees and what discourse did they and the mine authorities employ to explain the causes of this explosion? Finally, what can be identified as the key factors or causes that led to the explosion? Following these questions, I then engage these representations and understandings of the explosion in order to come to, what I feel, is a more nuanced, critical criminological understanding of the explosion.

In order to determine if any laws were broken during the time leading up to Upper Big Branch Mine explosion, as well as if a statutory defined crime was actually committed, the following chapter gives a brief history of coal mining regulations in the United States. Following that, Chapter Three presents a case study of the Upper Big Branch Mine explosion based on McAteer and colleagues report to the Governor, a report released after a yearlong investigation following the explosion, as well as different media accounts of the response to this disaster. Chapter Four gives a theoretical explanation of Diane Vaughan’s idea of the Normalization of Deviance, as well as Robinson and Murphy’s Contextual Anomie/Strain theory. Vaughan’s concept of the Normalization of Deviance suggest that based on a common theme of economic gain, officials will knowingly violate laws to achieve their organizational goal, or profit. Applying Vaughan’s Normalization of Deviance to the case study, I argue that in this case, Massey Energy, owners of Upper Big Branch, engaged in the normalization of deviance by accepting unsafe working conditions and faulty equipment as the norm. Robinson and

Murphy's Contextual Anomie/Strain theory takes the American Dream concept and brings the idea of maximization where greed plays an important role. In the case of the Upper Big Branch Mine, Massey Energy displayed a corporate mentality that placed the drive to produce and profit above worker safety. Finally, Chapter Five explains what actually constitutes a crime in general and explain any changes to the laws after this tragic accident.

Overall, this thesis will explain how Massey Energy and Upper Big Branch Mine officials knowingly violated safety regulations and allowed work to continue in a mine that had previously been cited numerous times for those violations. Ultimately, I will argue that the injurious or harmful actions of Massey Energy is best thought of as, "criminal," as opposed to just another tragic unpreventable accident.

Chapter Two: A Brief History of U.S. Coal Mining Safety Regulations

Seventeenth century coal mines were probably one of the most dangerous workplaces in which to operate. Coal mining was one of the few occupations where a worker had to be concerned with all four classical elements – earth, water, fire, and air. Surrounded by a dark, damp, and chilly atmosphere, miners had to deal with ceilings that had the potential to collapse on their heads, air that could smother, poison, or combust, and water that could rush in and drown them. Every time a miner went underground, he/she understood the risk associated with it and knew there was a chance he/she would never see the surface again (Freese, 2003). In 1891, Congress passed the first federal statute governing mine safety, a general mining law known as the 1891 Act. This law established minimum ventilation requirements at all underground mines and prohibited mine operators from employing anyone under the age of twelve (“History of Mine,” n.d.)

While this law may have helped avoid some disasters and save some lives, it did not prevent one of the worst mining accidents in United States’ history: a methane explosion in Monongah, West Virginia, in 1907 that killed 361 workers. Although this disaster left 250 widows and 1,000 children fatherless, it took another three years and a dozen mine disasters throughout the country and over 1,200 more dead miners before Congress passed additional legislation creating the U.S. Bureau of Mines (the “Bureau”) as a new agency in the Department of Interior.

Congress instructed the Bureau to investigate mining methods, “especially with respect to miners, and...the possible improvements of conditions under which mining

operations are carried on” (Goodell, 2006, p. 60). This legislation, however, provided no enforcement power at all. Inspectors could not even enter a mine without permission from the owner and, if they did, they were not allowed to publicize their findings. Three decades passed, along with thousands of coal miners, before Congress granted the Bureau the authority to inspect mines and publicize any findings. Enforcement power, however, would still have to wait (Goodell, 2006).

In 1947, after yet another investigation following an explosion in a mine in Illinois that killed over one hundred miners, it was revealed by the United Mine Workers of America that years of warnings about dangerous conditions in the mine were repeatedly ignored by the mine owner. After testimony given before Congress by the head of the United Mine Workers of America, Congress passed the Federal Coal Mine Safety Act of 1952, which President Harry Truman signed into law. Though this legislation was riddled with loopholes, including the fact that it excluded all surface mines and mine operations that employed fewer than fifteen people, it did, however, provide annual inspections in certain underground coal mines and gave the Bureau limited enforcement authority. This included the power to issue violation notices and imminent danger withdrawal orders. The Federal Coal Mine Safety Act of 1952 act also authorized the assessment of civil penalties against mine operators and gave mine inspectors the power to shut down certain types of dangerous mines.

Even with this legislation, the deaths did not stop. An explosion in 1968 in Farmington, West Virginia, changed the course of mine history and transformed mine safety and health in the United States. Seventy-eight miners lost their lives in a mine that had a history of accidents as well as numerous safety violations. After the explosion, a

fire broke out that burned for days before the mine was sealed to smother the flames; the bodies of the miners trapped inside were never recovered. As a result of this tragedy, the public once again demanded change and the following year, Congress passed the Federal Coal Mine Health and Safety Act of 1969 (Coal Act), which dramatically increased the enforcement powers of the Bureau. It also gave miners the right to request a federal inspection and for the first time required two annual inspections at every surface and four at every underground coal mine. The Coal Act also required monetary penalties for all violations and established criminal penalties for knowing and willful violations. Finally, the Coal Act provided benefits to miners totally and permanently disabled by “black lung” (Federal Coal Mine and Safety Act of 1969). The passing of this legislation was truly a landmark in coal mining safety in the United States, although, it came too late for the nearly 100,000 miners who had been killed since 1900 (Goodell, 2006; “History of Mine,” n.d.).

Though the rate of fatal accidents declined gradually in the year following passage, President Richard M. Nixon undercut the enforcement power of the Bureau with his appointment to top positions within it, leading the General Accounting Office to describe the policies for enforcing health and safety standards within the Interior Department as “extremely lenient, confusing, and inequitable.” Eventually the power to inspect mines and enforce all safety laws was transferred from the Department of the Interior to the Department of Labor in 1977, where a new agency, the Mine Safety and Health Administration (MSHA), was created. Even with this change, however, the enforcement of laws against coal companies continued to fail.

In 1976, in Letcher County, Kentucky, two gas and coal dust explosions occurred in as many days in the Scotia Coal Mine. The first explosion resulted in large part from inadequate ventilation, as well as from improper maintenance of electric equipment. The equipment also contained components that created “incentive arcing” or “sparking” during normal operation in an area where methane had accumulated. In addition, the required examinations had not been made prior to the operation of the electrical equipment. The second explosion was a result of lack of sufficient air to ventilate certain areas of the mine where there was a known methane accumulation. As a result, twenty-six people total were killed in these two explosions.

Following this disaster, Congress passed the Federal Mine Safety and Health Act of 1977 (Mine Act). The Mine Act amended the 1969 Coal Act in numerous ways and consolidated all federal health and safety regulations of the mining industry. The Mine Act also strengthened and expanded the rights of miners, including, in the case of a mine being ordered to close, the right to full compensation by the mine operator at regular rates of pay for the entire period a miner is idle, and increased the protection of miners from retaliation for exercising those rights. As a result, mining fatalities dropped significantly from almost 300 in 1977 to just fewer than 90 by 2000. In addition, after the creation of MSHA in this same year, the Mine Act established the independent Federal Mine Safety and Health Review Commission to provide for independent review of the majority of MSHA’s enforcement actions (“History of Mine,” n.d.).

The most recent mining disaster that resulted in the enactment of a new piece of legislation was the 2006 disaster at the Sago Mine in West Virginia. This disaster, like so many before it, occurred from a methane explosion in a recently sealed area of the mine

that blew out the seals and sent smoke, dust, debris, and lethal doses of carbon monoxide into working sections of the mine. As a result of this explosion, one miner died instantly following the blast while twelve others were trapped for almost two days and ultimately died of carbon monoxide asphyxiation before they could be rescued (Mine Improvement and New Emergency Response Act of 2006).

Once again following another deadly mining disaster, the public demanded answers. Questions regarding MSHA's competency and willingness to enforce mining laws were brought up after an investigation revealed that the Sago Mine had been cited for more than 200 federal safety violations during the previous year. West Virginia Senator Robert Byrd brought these questions to the forefront during a powerful Senate floor speech, asking "Could an automobile driver...rack up 276 speeding tickets and still have a license?...But here was a coal company with 276 violations and still operating" (Goodell, 2006, p. 64). As a result, Congress passed the Mine Improvement and New Emergency Response Act of 2006 ("MINER Act"), which dramatically increased the fines against mining companies that repeatedly violate federal safety rules.

The MINER Act required emergency response plans in all underground coal mines, added new regulations regarding mine rescue teams and the sealing of abandoned areas, and required prompt notification of mine accidents. The MINER Act also enhanced civil penalties up to \$220,000 for flagrant violations and criminal penalties up to \$250,000 for the first offense and \$500,000 for the second. Finally, the MINER Act required wireless two-way communication and electronic tracking systems that provide post-accident communication between underground and surface personnel, and allow surface personnel the ability to locate any person trapped underground.

Despite all the legislation requiring safer working conditions and better mining equipment, according to the National Institute for Occupational Safety and Health (NIOSH), mining is still one of the most dangerous occupations in America, with underground coal mines the most dangerous of all. Fatality rates in underground mines are five times higher than in surface coal mines (NIOSH, 2004). In West Virginia, coal mines have recorded the highest rate of fatal accidents and injuries in the United States, and mines in southern West Virginia, where the Upper Big Branch Mine is located, have been exceptionally deadly. In 1996, a study by MSHA found that 70 miners were killed on the job in southern West Virginia that year. This means that 28 percent of all U.S. mining fatalities occurred in an area that employs only 13 percent of the nation's miners. Indeed, McAteer (2001) found that between 1991 and 2000, 25 percent of the country's 458 coal mining fatalities occurred in southern West Virginia (McAteer, 2001; McAteer et al., 2011).

Chapter Three: The Upper Big Branch Mine Explosion: A Case Study

The Explosion at the Upper Big Branch Mine

At approximately 3:02 p.m., Monday, April 5th, 2010, a powerful explosion ruptured through two and one-half miles of underground at the Upper Big Branch (UBB) mine in southern West Virginia. Killing twenty-nine miners and seriously injuring one, this incident was the worst mining disaster in the United States in 40 years.

The twenty-nine miners killed that day ranged in age from twenty to sixty-one with experience levels from only a few years to thirty-six years—including one miner who was just weeks away from retirement. Not only were these individuals coal miners, but several of them were also volunteer firefighters at their local departments and one was a substitute teacher and coach for various sports. There were also several veterans who became coal miners after they completed their service.

The explosion was so powerful some miners were actually decapitated, while others smothered to death under the rubble. Following the explosion, search and rescue crews began to search for those still alive trapped inside and recover the bodies of the deceased. In the case of one miner, it took several days to find his remains because he was blown into the roof of the mine, and those searching for him were looking only down at the ground and to either side. As the search and rescue mission continued, family members of the miners began arriving at the scene. One family member, who later found out her son was one of the deceased, described how “cold” the scene really was. “They would shout out, if I call your name, go over to Whitesville Fire Department and identify

the body,” while another said, “no one [from Massey Energy] called us” following the blast (Galuska, 2012).

A week following the explosion on April 13, 2010, then West Virginia Governor Joe Manchin III asked J. Davitt McAteer, former Assistant Secretary of Labor in charge of the federal Mine Safety and Health Administration (MSHA), to conduct an independent investigation into the disaster. McAteer formed the Governor’s Independent Investigation Panel (GIIP), enlisting the help of a group of colleagues with expertise in coal mining, mining law, mining communities, occupational safety and public health. After a yearlong investigation, the GIIP released a report and concluded that the explosion at the Upper Big Branch mine could have been prevented and was a direct result of the actions and omissions of the mine owner, Massey Energy, and the Mine Safety and Health Administration (McAteer et al., 2011). The following chapter is based on the GIIP’s report.

The Aftermath of the Explosion

Throughout the entire investigative process, Massey Energy stood by its assertion that the explosion was caused by a massive and unforeseen inundation of methane or natural gas from a crack in the mine floor. Every mine explosion, however, leaves behind a footprint that presents clues to investigators about things, such as where the blast originated and how the force traveled from the ignition point. MSHA officials offered their opinion prior to the investigation that the explosion at Upper Big Branch was caused by “the combustion of accumulations of methane, combined with combustible coal dust mixed with air.” The footprint left behind supports the position that the explosion actually started with the ignition of a small amount of methane gas and

was then fueled by coal dust that had been allowed to build up for miles throughout the mine (McAteer et al., 2011, p. 67).

All the eyewitnesses that could have testified as to what happened in the minutes leading up to and just after the explosion were dead. Physical evidence left behind, however, allows the following conclusions to be drawn. As the shearer operator cut into the sandstone top of the longwall, the friction created sparks, which occurs quite frequently in underground mining. Typically, when machinery cuts into coal there is some sparking because the coal is soft. But when the shearer hits rock surrounding coal, sparks fly. In this case, the sparks ignited a pocket of methane or natural gas that had likely risen from the floor or had migrated from the gob,— an area of the mine behind the longwall. The shearer, which is equipped with water sprays designed to put out a flame at the point of ignition, was later tested, it was found that the sprays were ineffective because some had been removed or were clogged. The crew working in this area could do nothing to stop the spread of the fireball, as it ignited the buildup of coal dust.

The explosion was a series of explosions created as the compressed air on the leading edge of the force caused the coal dust to become airborne. As a result of this, the explosion actually generated its own fuel with the air/dust mixture behaving like a line of gunpowder, carrying the blast in multiple different directions (McAteer et al., 2011, p. 23).

The GIIP determined that the explosion was the result of the failures of three main basic safety systems that were identified and codified to protect the lives of miners. First, water sprays on the equipment were not properly maintained and failed to function as they should have. Second, the company failed to meet federal and state safe principal

standards for the application of rock dust. As a result, coal dust provided the fuel that allowed the explosion to spread. Third, the ventilation system did not adequately ventilate the mine, which lead to the buildup of gases throughout the mine. Because of these three failures, even a small ignition could not have been quickly extinguished if needed (McAteer et al., 2011, p. 4).

Working with faulty equipment. The GIIP concluded that maintenance of safety equipment was not a priority at the Upper Big Branch Mine, as evidenced by the condition of the shearer, broken rock dusters, and defective airlock doors. This lack of maintenance, particularly on the shearer, was a direct cause of the explosion. MSHA officials conducted tests following the explosion and found that the water sprays on the shearer were ineffective due to the fact that some were clogged and others had been removed all together. Worn bits on the machine were also found, which exposed steel shafts that increased the danger of sparking when they hit rock. Further MSHA testing revealed that even if the shearer had been working properly, water lines on the longwall could not adequately supply water to the shearer when needed to suppress a fire (McAteer et al., 2011, p. 23, 99).

The lack of properly maintained equipment is further evidenced through the numerous post-explosion violations cited by MSHA. The GIIP found that the mantrap, the vehicles used to transport workers throughout the mine, were in terrible condition and the main track haulage was not properly maintained throughout much of the mine. Testimony was given to the GIIP that suggested that the methane detectors, located on numerous pieces of equipment and used to alert miners to high levels of methane in the mine, had been “bridged out” or disabled. This was done in order to keep up production

without taking time to make repairs when the detectors indicated such high levels. Not only is disabling equipment a violation of state and federal law, but it put workers in constant danger. Although equipment disabling has not been directly linked to the explosion itself there is a chance it helped fuel the fire (McAteer et al., p. 99).

Coal dust and rock dust. Rock dust, or crushed limestone, has long been regarded as a vital safety component in underground mines because it dilutes the explosive nature of coal dust. The large Upper Big Branch Mine had only a two man crew who worked part-time spreading rock dust throughout the entire mine during the overnight shift. In addition, the senior member of this crew was repeatedly pulled off his dusting duty to perform other jobs (McAteer et al., 2011).

The Upper Big Branch Mine used track-mounted tanks or pod dusters to rock dust the track haulage, belt lines, airways, working sections and construction sites. To effectively use a track duster in a mine this size would have required drilling a borehole midway in the mine and not far from the working sections. This would have allowed a quick delivery of bulk rock dust to refill the tank dusters. Investigators found no such borehole at Upper Big Branch, however. This meant the rock dust crew had to take a loaded duster from the outside the mine to its point of destination and disperse the dust and when the duster was empty, they had to travel back outside to refill it. Because it was a two-hour round trip to refill a duster, it is unlikely that more than one tank of dust per shift or per day was applied using the orange duster. Miners, using forty pound bags of dust that were transported to the sections on flat cars, would spread rock dust by hand on the floors and walls of working sections. This still meant the roof was not dusted, however, even though it was required by law. Miners found it difficult to spread it on the

top of the mine by hand and some even testified that trying to do so made it extremely hard for them to breathe (McAteer et al., 2011, p. 50).

Dusting, which was complicated to begin with given the size of the crew in relation to the size of the mine, was made even more difficult due to the fact that the big orange duster at Upper Big Branch did not work properly much of the time. The senior member of the dusting crew said, “Sometimes it would clog up, so we would have to spend 30 minutes trying to unclog the hoses...then it would clog again.” Other workers gave testimony that “It [the pod duster] would break a lot...you have to have it just right” (McAteer et al., 2011, p. 50). Due to the age of the duster and lack of adequate maintenance, however, it was not surprising that this two-man crew had constant trouble with the duster. This was immediately evident to investigators when Massey employees attempted to use the duster to perform MSHA-required dusting the first time following the explosion: the motor burned up. According to documents obtained from the manufacturer of the duster, by the time this incident occurred, the duster was more than twenty-five years old and had not been rebuilt for at least seven years (McAteer et al., 2011, p. 50-51).

In order for the Upper Big Branch Mine to have been in compliance with the minimum state and federal regulations, management should have assigned crews to rock dust designated areas of the mine each shift. The only way a mine the size of Upper Big Branch could justify a two-man crew would be if they were assigned solely to rock dusting on at least two shifts each day, and preferably on all three shifts. The age and poorly maintained condition of equipment, combined with the fact that Upper Big Branch did not have an established dusting crew that followed a schedule led the GIIP to

conclude that at Upper Big Branch rock dusting was not a priority in the early days of 2010 (McAteer et al., 2011, p.51).

Worker testimony is not the only evidence of inadequate dusting. In 2009, mining inspectors with the West Virginia Office of Miners' Health Safety and Training (WVMHST) issued 26 citations at UBB mine for coal dust accumulation and for failure to adequately apply rock dust. In addition, in the fifteen months prior to the disaster, federal and state inspectors issued citations every month except one for rock dust issues. Violations were found in all four sections of the mine, as well as the longwall, and along several of the belts, and nearly half of the 40 citations issued by MSHA were classified as "significant and substantial" (McAteer et al., 2011, p.54).

Despite the very detailed requirements outlined in the Coal Act of 1969, the GIIP found that Massey did not have adequate procedures in place to ensure that the company complied with rock dust requirements. Officials from Massey Energy, however, have repeatedly stated that coal dust played no part in the explosion at the Upper Big Branch Mine. The company's general counsel, Shane Harvey, even told the Associated Press that the mine "appears to have been very well rock-dusted with rock dust still in place" (McAteer et al., 2011, p.54-55). Witness testimony, the series of citations issued by state and federal officials, the preshift examination records of the conveyor belts, the absence of a systematic rock dust procedure, the fact that rock dust crews were given other assignments, the physical distance the explosion traveled, and the findings from the rock dust samples taken after the explosion, strongly suggest otherwise. Moreover, if coal dust had not been a factor in the explosion, the damage might have been contained to just the longwall area. That was not the case, however, because pieces of several victims on

the mantrap were found as far away as 1.15 miles from the longwall, and parts of victims on Headgate 22 were found about 0.75 miles from the longwall as a result of the force of the explosion (McAteer et al., 2011, p. 54-55).

Inadequate ventilation. Every underground coal mine in the United States is required by the 1891 Act to have a ventilation system approved by MSHA. This system is designed to push fresh air through the mine, remove coal dust and keep air in the mine from being stagnant, and prevent the buildup of methane and other toxic gases. The system also helps keep previously mined areas free from any buildup of gas. The ventilation system used at Upper Big Branch Mine was known as a push-pull system. In the north area of the mine, the air was pushed into the mine at the North Portal and then pulled through the mine by the Bandytown fan. Once the air had traveled its intended course, it then exited the mine through several different return entries as well as the main return shaft.

The system at the Upper Big Branch Mine had one major design flaw. The fans needed to push and pull air throughout the mine were configured solely to direct air in a straight line, even though miners worked in areas away from the horizontal path. As a result, air had to be diverted from its natural flow pattern into the working sections on the longwall, Headgate 22, Tailgate 22, and the crossover sections. All of these sections were located on different sides of the natural flow pattern, meaning multiple ventilation controls had to be constructed that were frequently in competition with one another. This competition for air led to dangerous practices of ad hoc modifications to the ventilation system by foremen who were concerned with providing adequate air for their crews. While the fans had sufficient capacity to adequately ventilate a mine with a physical size

as large as Upper Big Branch, the challenge was that the air had to be forced and directed through multiple “ventilation controls,” including stoppings, overcasts, regulators, seals and airlock doors, to make sure all areas were adequately ventilated. The location, construction and maintenance of these controls were critical to proper functioning of a ventilation system. During the investigation at Upper Big Branch, the GIIP found that several of these controls were missing, poorly constructed, and in need of repair.

In addition, state, federal and independent investigators were all in agreement that there were too many airlock doors at Upper Big Branch Mine. These doors were used to prevent air from short-circuiting as workers and equipment enter and moved throughout the different areas of the mine. That said, the problem with using airlock doors is that the air can be short-circuited if the doors were left open, and workers testified this was often the case in an attempt to allow more air into the areas in which they were working. Miners also testified that the doors were not properly maintained, which resulted in leakage in and around them (McAteer et al., 2011, p. 60-61).

Federal and state inspection records also indicate that Upper Big Branch Mine was cited every month during 2009 for failure to ventilate the mine according to the approved ventilation plan. Violations included insufficient air reaching sections of the mine and stoppings with holes in them, airlock doors open on both sides, and reversed airflow and resulted in 64 citations in all. In addition, in early 2010, an MSHA inspector claimed that Performance Coal’s, a subsidiary of Massey Energy, senior management officials showed a “reckless disregard” for worker safety when they told a foreman to ignore a citation the mine received for faulty ventilation (McAteer et al., 2011, p. 60, 62).

The GIIP found that a continuously failing ventilation system and the mine's upper management officials reluctance to fix known problems resulted in a build-up of methane gas that, in the end, provided the fuel needed for an explosion to take place. A methane explosion will take place when the buildup of methane gas comes into contact with an ignition source, like a flame or spark. In spite of the fact that sparking is common in the mining process, small methane ignitions do not have to turn into major explosions if mine operators adhere to basic safety measures, such as maintaining ventilation systems, removing explosive coal dust from mining operations, spreading required amounts of rock dust, and ensuring that water sprays are functioning properly. Due to the fact that these basic safety systems failed at Upper Big Branch, a minor flare up of methane gas led to the nation's worst coal mining disaster in 40 years (McAteer et al., 2011, p. 67).

The Massey Way

At the time of the Upper Big Branch explosion, Massey Energy, which was formed in 1916, was the fourth leading coal producer in the country and the largest in the Appalachian region, producing approximately 40 million tons of coal each year from underground and surface mines in Virginia, West Virginia and Kentucky. The company is infamous for causing incalculable damage to mountains, streams and air in the coalfields, as well as for creating health risks for coalfield residents through the pollution of streams, injecting slurry into the ground and failing to control coal waste dams and dust emissions. Massey Energy has also been known to use vast amounts of money to influence the political system and to battle government regulations regarding safety in coal mines and environmental safeguards for communities. CEO Don Blankenship, who

was a prominent GOP fundraiser, contributed more than \$300,000 to federal candidates during the decade prior to the 2010 explosion. In addition, in 2004, Blankenship spent \$3.5 million on vicious attack ads in a campaign to replace a long-time West Virginia Supreme Court justice while a case with a great financial significance to Massey Energy was pending before the court (McGarity, 2012).

The Upper Big Branch Mine was not the first Massey owned mine to experience a disaster. In 2006, a fire in their Aracoma Alma Mine #1 broke out as a result of what federal authorities called “reckless disregard” for safety rules and negligent mining practices. MSHA determined that the company failed to adhere to basic safety standards consisting of installing a sprinkler system and maintaining a water supply that could have been used to fight the fire. Ultimately, the most serious safety violation involved the removal of ventilation controls allowing the fire to enter the miners’ primary escape passage once the fire broke out. In 2009, federal indictments were issued and Aracoma Coal Company entered a guilty plea to ten criminal violations of mine safety law related to the fatal fire and agreed to pay a \$2.5 million criminal fine. Included in the plea was one felony count of willful violation of mandatory safety standards resulting in death, eight counts of willful violation of mandatory safety standards, and one count of a false statement. While MSHA investigated the fatalities, more than 1,300 citations against the company for violating federal mine safety laws and regulations were issued. Massey paid an additional \$1.7 million to resolve the citations culminating in a combined total of \$4.2 million in criminal and civil penalties. To date, this is the largest fine imposed on a coal company in the history of federal mine safety laws.

More than four years after the disaster at Aracoma Alma Mine, new evidence was found that Don Blankenship, the company's chairman and chief executive officer, was aware of the problems at the mine prior to the fire. A reporter for *The Charleston Gazette* explained that Blankenship sent someone to investigate the condition of the conveyor belt in the mine. A memo detailing the findings, dated just six days before the fire, described the condition as "indeed it was not okay," yet work continued throughout the mine (McAteer et al., 2011, p. 92-93).

Following its investigation of the Upper Big Branch Mine disaster, the American University's School of Communications released a detailed analysis of Massey's safety record conducted by its Investigative Reporting Workshop. It found that between 2000 and 2010, no United States coal company had a worse fatality record than Massey Energy. Fifty-four workers were killed in Massey mines during that times, including the twenty-nine in the April 5th explosion, as well as two who died at other mines after that. After the release of the report, Blankenship claimed that working in Massey mines involved "difficult underground conditions" and that the number of deaths was "about average." This assertion is contravening, however. American University investigators, who found that during the same time period, only six fatalities occurred in the mines operated by the nation's largest coal producer, Peabody Energy. During that same time frame, investigators also found that Massey had been cited for 62,923 violations, including 25,612 considered "significant and substantial." MSHA proposed \$49.9 million in fines against Massey— \$15 million more than any other company (McAteer et al., 2011, p. 92-93).

Throughout all of the investigations, Blankenship consistently maintained that safety was his number one priority since he became part of Massey's management team and "Massey does not place profits over safety" (McAteer et al., 2011, p. 94). Several miners, however, gave testimony that "they want production" and those who tried "to do the right thing" in terms of safe mining were "usually the people that [got] kicked in the teeth for it" (McAteer et al., 2011, p. 95).

Following their practice of twisting information to their advantage, Massey Energy officials continuously made public statements that the explosion at the Upper Big Branch Mine was a tragedy that could not have been anticipated or prevented, though evidence has been presented to the contrary.

The Role of Federal Officials

In the weeks following the Upper Big Branch Mine disaster, officials with MSHA consistently defended their agency's performance in this particular mine. They also pointed out that the federal Mine Act places the responsibility for providing a safe workplace solely on the shoulders of the employer, and insist that the operator is the one ultimately responsible for operating a safe mine. And while to a certain extent this is true, it is not the whole story.

Simply having laws on the books has never been enough to ensure worker safety and the ability of a government to strictly enforce those laws is a "hard-earned right paid for with the blood of coal miners" (McAteer et al., 2011). Mine health and safety regulations have the potential to narrow an operator's profit margin and some mine owners try to evade, ignore or sidestep those regulations. Because of this, workers need a strong watchdog to ensure that this drive for profit is not allowed to minimize workers'

rights to a safe workplace. In the case of coal miners, the watchdog at the federal level is MSHA.

MSHA receives a sizable annual appropriation from Congress to issue regulations and ensure that mine operators comply with them. In 2010, that appropriation was \$357.3 million. With 92 duty stations across the country, the agency's 2,300 employees are responsible for inspecting coal mines and other operations, such as stone quarries, metal mines and dredging operations. They also monitor a variety of mandates on mine operators, including requirements to submit and receive approval on engineering plans for ventilation, dust control and roof control, in addition to training and emergency response plans. MSHA officials are authorized to enter any mine property at will and are, in fact, required to conduct complete mine inspections four times per year at every underground mine and twice a year at every surface mine. They are also supposed to conduct spot inspections every five days at a mine that releases excessive quantities of methane (McAteer et al., 2011).

An inspector's job, when done correctly, is quite tough. The best mine inspectors must have not only keen eyes and ears, but must know the regulations inside and out. They must also be able to quickly digest the mine's ventilation, roof control and other engineering plans, and to thoroughly document their observations. In addition, inspectors must also develop thick skin because they spend days at a time in the mine with the very company officials they cite for safety violations. After writing these citations, the inspectors must then return to the mine to make sure the safety violations in question have been addressed (McAteer et al., 2011, p. 76).

Some mining companies, Massey Energy included, seize the opportunity to challenge an inspector's action by disputing the findings and arguing about what the law actually requires. Massey's Vice President for Safety Elizabeth Chamberlin, even reportedly took a violation written by an inspector, looked at her people and said, "Don't worry, we'll litigate it away" (McAteer et al., 2011, p. 77). And as one long-time MSHA official told investigators, "Massey trains our inspectors better than we do" (McAteer et al., 2011, p.77) – meaning the way inspectors are treated during inspections at Massey mines affects the enforcement attitude of the inspectors.

Realizing that some companies are more prone to test the boundaries of safe practices, Congress gave MSHA the power to establish what it terms a "pattern of violation" category laid out in the Mine Act of 1977 (McAteer et al., 2011). This category was created to address mine operators who are cited over and over again for "significant and substantial" violations. MSHA was also given the authority to determine what constitutes a "pattern of violation" and is responsible for notifying a mine operator when it falls into this category. Any "significant and substantial" violation issued by an inspector within 90 days after a "pattern of violation" is determined will result in miners being ordered out of the affected area. But it was not until 2006 that MSHA began to notify a small number of operators that they had a "potential" pattern of violation and of the 20 operators who received warning letters, Massey Energy mines received four of them. None of the mines however, actually received any stiffer sanctions because once they had reduced their violation rates, they were taken off the "potential pattern of violation" list (McAteer et al., 2011, p. 77).

At the Upper Big Branch Mine, in particular, federal officials were kept very busy. Inspectors spent 1,854 hours at the mine in 2009, which is nearly twice the amount of time they spent there in 2007. Moreover, in 2009, 515 citations and orders for safety violations were written, including 48 withdrawal orders for repeated significant and substantial violations. The monetary penalties accrued from these violations totaled nearly \$1.1 million.

Several provisions of the MINER Act, passed in 2006, gave MSHA tougher new enforcement tools, including the authority to issue “flagrant” violations, with fines of up to \$220,000, against companies which repeatedly failed “to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard that...reasonably could have been expected to cause death or serious bodily injury.” In the last five years prior to the writing of the report to the Governor (2006-2011), MSHA has used this authority in coal mines more than 125 times, resulting in \$19.5 million.

Despite the fact that the Upper Big Branch Mine was cited dozens of times in the years before to the explosion for violating ventilation plan requirements, MSHA never once cited Upper Big Branch for a flagrant violation. Despite MSHA’s considerable authority and resources available, its collective knowledge and experience of inspectors, the disaster at Upper Big Branch Mine suggests that the agency failed its duty as the watchdog for coal miners. And when asked MSHA officials have not been able to explain why they failed to use the “flagrant” tool at Upper Big Branch, an MSHA spokesperson has replied that it is a matter being examined by MSHA’s “internal review” team (McAteer et al., 2011).

Response Following the Explosion at the Upper Big Branch Mine

Just nine days after the explosion Representative George Miller, a California Democrat and chair of the House Education and Labor Committee, released a list of forty-eight mines that had been identified by federal mine safety officials for increased scrutiny but had not been so investigated due to unresolved appeals filed by the mine operators. Of the forty-eight mines Miller named, six of them were owned by the same operator of the Upper Big Branch Mine, Massey Energy.

Under current law, once MSHA issues a letter warning a mine operator that it may be sanctioned under a “pattern of violation,” a mine must take immediate actions to reduce future violations or risk facing drastic sanctions, including mine closure. To meet the criteria of a “pattern of violation,” a mine must receive at least twenty significant and substantial violations, two elevated enforcement actions, and one unwarrantable failure violation over the previous twenty-four months. A mine must also have a violation rate that is 25 percent higher than the industry average over the same period.

The Upper Big Branch Mine was issued 515 citations in 2009. This number should have been enough to place them in the “pattern of violation” category and possibly be shut down. Because officials at Massey Energy contested so many of them, however, the Upper Big Branch Mine was not closed. Representative Miller explained that he believed the reason the mines were never actually closed was that the companies repeatedly appeal citations which prolongs the review process, and this was made quite evident in a backlog of the more than 16,000 appeals on the books (Mosk, 2010; Ward, 2010).

Following the explosion at Upper Big Branch, MSHA issued a report to President Obama detailing the “troublesome” safety record of Massey Energy. The President subsequently called this disaster “a failure, first and foremost, of management, but also a failure of oversight and a failure of laws so riddled with loopholes that they allow unsafe conditions to continue.” Furthermore, President Obama stated that “We owe [the people of West Virginia] more than our prayers. We owe them action...They ought to know that behind them there is a company that’s doing what it takes to protect them, and a government that is looking out for their safety.”

In its report, MSHA stated that it would not only seek to gain subpoena power and the authority and means to protect whistle-blowers but also the ability to make “knowing violations” of safety laws felonies rather than misdemeanors. MSHA also wants to encourage miners to report safety violations by ensuring that they do not lose pay if regulators order the withdrawal of workers from unsafe mining conditions. Had MSHA possessed such power prior to the April 5th explosion, the lives of 29 miners might have been saved (Shear & Mufson, 2010).

In April of the year following the explosion at the Upper Big Branch Mine, criminal prosecutions began. The first prosecution was of a Massey Energy employee who formally worked at the Upper Big Branch Mine. Thomas Harrah, a foreman at the Upper Big Branch Mine, pled guilty to faking a foreman’s license when he performed key mine safety examinations and to lying to investigators following the 2010 disaster, both of which received felony sentencing. Upon receiving his sentencing, Harrah spent 10 months in jail (Ward, 2011).

Massey Energy's Security chief, Hughie Stover, was the next former Upper Big Branch employee convicted of criminal charges in the case of the 2010 explosion. Stover was convicted of two felonies: making false statements and obstructing justice during the investigation following the explosion. A jury concluded that Stover lied to investigators, as well as destroyed evidence about Massey's practice of warning underground workers when federal inspectors arrived. U.S Attorney Booth Goodwin argued that Stover's actions, including requiring mine security guards to act as lookouts for mine inspectors, and making radio announcements the moment an inspector arrived, played a major role in causing explosion that killed 29 miners.

In its report following the incident, MSHA also concluded that Massey "established a practice of using staff to relay advance notice of health and safety inspections to mine personnel when federal and state inspectors arrived at the mine." MSHA claimed this advanced notice allowed employees to conceal violations and avoid fixing major problems, and prosecutors stated that Stover "played a singular and indispensable role in these warnings." By statute, Stover could have faced a maximum of 25 years in prison for his actions that directly led to the deaths of 29 miners (Ward, 2012a). In February 2012, however, he was sentenced to three years in federal prison for lying to investigators and ordering a subordinate to destroy documents (Ove, 2012).

The third person to be charged in the federal criminal investigation of the Upper Big Branch Mine disaster is also the highest ranking official charged to date. Mine superintendent, Gary May, was charged with conspiracy to defraud the federal government's mine safety enforcement efforts by covering up dangerous conditions prior to the April 2010 explosion. Like Stover, May was accused of taking part in a scheme to

provide advance warning of government inspections and then hiding or correcting violations before federal agents could make it into working sections of the mine. U.S. Attorney Booth Goodwin and Assistant U.S. Attorney Steve Ruby also allege that May “caused and ordered” methane monitors to be disabled on a continuous mining machine at Upper Big Branch less than two months prior to the explosion. Furthermore, May was alleged to have ordered another employee at Upper Big Branch to falsify mine examination records by omitting hazardous conditions, such as high water, even though it is required that it be reported and then repaired. May could have faced up to five years in prison for the one felony charge (Ward, 2012b), but in January 2013, he agreed to a plea deal and was sentenced to just twenty-one months in prison, along with three years of probation and a \$20,000 fine for one felony count of conspiracy to impede the federal government’s mine safety efforts (Ward, 2013). Blankenship, for his part as CEO, escaped unscathed.

Chapter Four: The Normalization of Deviance at the Upper Big Branch Mine

The Normalization of Deviance

Driven by the pressures from the competitive environment, business managers and government officials may violate the law to attain certain desired organizational goals. This will occur unless the legal penalties exceed whatever benefits the company could gain by violation. For example in 1986, the Challenger space shuttle exploded due to the failure of a rubber O-ring designed to seal joints on the shuttle's solid rocket booster. After repeated warning by contractor engineers that launching was risky in the cold temperatures at the time, NASA managers who were immediately responsible for the decision to launch disregarded the advice and proceeded with the launch because sticking to the schedule was all-important at the space agency. Studies show, however, that in the years preceding the launch, engineers and managers together developed a definition of the situation, which Diane Vaughan, a professor of sociology and international and public affairs at Columbia University refers to as the "normalization of deviance"—a definition that allowed them to carry on as if nothing were wrong, when this hardly proved to be the case (Vaughan, 1998).

After the Challenger disaster, Vaughan, questioned whether the disaster was simply a technological failure coupled with a failure of middle level management. Vaughan investigated organizational, rather than individual, misconduct. According to Vaughan (1996), the normalization of deviance

occurs when actors in an organizational setting, such as a corporation or government agency, come to define their deviant acts as normal and acceptable because they fit with and conform to the cultural norms of the organization within which they work. Even though their actions may violate some outside legal or social standard and be labeled as criminal or deviant by people outside the organization, organizational offenders do not see these actions as wrong because they are conforming to the cultural mandates that exist within the workgroup culture and environment where they carry out their occupational roles (Vaughan, 1996 as cited in Kramer & Kauzlarich, 2010, p.82).

The following section will apply Vaughan's theory of the Normalization of Deviance to the Upper Big Branch Mine Explosion.

The Normalization of Deviance at the Upper Big Branch Mine

While trying to produce coal, and ultimately earn a profit, Massey Energy accepted the faulty ventilation system, inadequate rock-dusting and poorly maintained equipment –arguably a normalization of deviance akin to that of the Challenger explosion. The pre-shift/on-shift examination system that was devised with the intention of identifying problems and addressing them before they became disasters was a failure. The majority of people would find it completely unacceptable for workers to drudge through neck-deep water or be subjected to a consistently changing ventilation system, which is a miner's only real lifeline in an underground mine, when this is not the standard in coal mining. These types of practices can exist only in a workplace where the deviant has become the normal, and the discussion in chapter two suggests that a great number of

deviant practices were normalized at the Upper Big Branch Mine. These practices included lack of air, illegal ventilation changes, engineering issues, water problems, lack of safety equipment, inadequate rock dusting, an ineffective fireboss system, fraudulent fireboss practices, faulty equipment and structure, airlock doors rather than overcasts, and disabling safety mechanisms. I examine each of these below:

Lack of air. A chronic problem faced in some parts of the Upper Big Branch Mine was extremely low airflow. As a result, it became very common for miners and section bosses to “go get some air” by closing airlock doors or hanging curtains. While airflow reversal is indicative of a serious problem with the mines ventilation plan, however, at the Upper Big Branch Mine, this low airflow became part of the standard operating procedure.

Illegal ventilation changes. Following the explosion, MSHA discovered that major ventilation changes were being made while miners were actually working underground in the mine. While this was a blatant disregard for worker safety, as well as a violation of law, it was considered the norm at Upper Big Branch.

Engineering issues. The Upper Big Branch Mine lacked an effective engineering design and rather than having an engineering plan to guide the mining process, several persons testified that the mine was actually engineered as operations advanced further into the mine. Evidence also suggests that the engineers who were working for Massey’s Route 3 Engineering were quite frequently not involved with ventilation changes made by upper management at the mine. One of the engineers offered testimony to the investigators, saying he “traveled underground at Upper Big Branch only once every couple of years,” while another said he “had very little involvement with the Upper Big

Branch Mine.” The most shocking testimony, however, came from an engineer who said he “had never been underground at Upper Big Branch” (McAteer et al., 2011, p.98).

Water problems. The Upper Big Branch Mine had continual problems with high water. This not only affected the ventilation system, but put miners at an enormous safety risk. Miners, particularly very young, inexperienced workers, were continuously sent into chest-deep water. Rather than consider such conditions hazardous, officials of Upper Big Branch viewed those conditions “as just another job that had to be performed” (McAteer et al., 2011, p.98).

Lack of safety equipment. Miners were frequently placed in hazardous conditions deep in the mine with no communication, no vehicles, and no gas detectors and only one means of entrance and egress. Sending miners into isolated parts of the mine without even the most basic safety equipment can be regarded as a form of deviance because it poses considerable threat to the life and well-being of each individual worker.

Inadequate rock dusting. Rock dusting has long been recognized as one of the most basic elements of safe mining because it can help prevent flare-ups from turning into major explosions. Rock dusting does not appear to have been a common practice at the Upper Big Branch Mine because there was only a two-man crew assigned to dust the entire mine on a part-time basis with rock dusting equipment that did not work properly. Tests conducted after the explosion revealed severely inadequate dusting and return entries. These entries that air returned through once it ventilated the entire mine were completely black, indicating the area had not been rock dusted.

Ineffective fireboss system. The preshift/onshift examination process that was meant to identify problems and protect the lives of the miners working was perpetually

broken at the Upper Big Branch Mine. Records indicate that both state and federal inspectors wrote citations for ventilation problems, however, fireboss records in the majority of cases failed to reveal when and where the inadequate ventilation was found. Because identifying unsafe conditions might have meant taking the man-hours to correct the problems, it was widely acceptable at Massey Energy to do nothing. For example, firebosses recorded the need to clean up high levels of coal dust, but there were no records that the problems were ever addressed. In essence, it did not seem to matter whether or not a fireboss did his/her job. In fact, records indicate that in the ten days prior to the explosion, only eleven percent of the rock dustings requested were actually completed.

Fraudulent fireboss practices. Weeks after the explosion, investigators discovered that one Upper Big Branch foreman, who was responsible for assessing gas and water levels in critical entries adjacent to the longwall panel, had not even turned on his hand-held methane detector even though he had recorded gas readings in examiners books. Data were downloaded from other foremen's methane detectors that indicated the devices had also not been turned on at times when the foremen were underground and responsible for identifying hazardous conditions. Not only is it a violation of state and federal laws to fail to take these required readings, it also demonstrates a privileging of profits over precautions. Furthermore, it suggests an extremely dangerous attitude that firebossing a mine is just another burden imposed by both MSHA and the WVMHST.

Faulty equipment and structure. Inattention to equipment and structure was the norm at the Upper Big Branch Mine, as evidenced by a poorly maintained top of the line shearer, broken rock dusters, and damaged and defective airlock doors. MSHA tested the

shearer and found water sprays missing or clogged, in addition to worn bits on the machine, which exposed steel shafts that increased the danger of sparking. MSHA also found that the water lines on the longwall could not sufficiently supply water to the shearer in the event of a fire. Moreover, the mantraps were in terrible condition and the main track haulage was not maintained in parts of the mine. As such, it seems that the failure to maintain equipment and structure was not considered a safety issue that had the potential to cause harm if not promptly addressed.

Airlock doors versus overcasts. Massey Energy often installed airlock doors in its mines rather than constructing permanent overcasts to direct airflow, which are more expensive and take longer to install than airlock doors. First, airlock doors are vulnerable to damage if they are struck by heavy equipment moving through them. The doors can also be compromised if they are accidentally left open by workers. Finally, and most importantly, it is almost impossible to make them truly airtight, which means they frequently leak methane to other parts of a mine. Hence, we can conclude that the doors were used as a relatively inexpensive shortcut to address ventilation issues, without regard for the best choice for the safety of workers.

Safety mechanisms disabled. Lots of testimony was given that suggested that methane detectors on equipment had been “bridged out” or disabled, so that production could continue without taking time to make repairs. Not only is this type of practice a violation of state and federal law, it presents a constant danger to workers (McAteer et al., 2011).

As indicated in the above section, certain deviant practices had become normalized at the Upper Big Branch Mine. By allowing these practices to not only be

normalized in the first place but to continue shows a clear indication that the desire to make a profit was the number one priority at the Upper Big Branch Mine. As a result of this desire, even the most basic safety regulations were repeatedly ignored, resulting in the loss of twenty-nine innocent lives.

Contextual Anomie/Strain Theory

Institutional anomie theory, developed from Agnew's general strain theory and Merton's anomie theory, provides that human behavior can be understood as a product of social organization (Messner & Rosenfeld, 2007). There are two basic dimensions of social organizations; culture and social structure. Messner and Rosenfeld (2007) take these two dimensions and focus their argument around the "American Dream" concept. The American Dream is the idea that anyone can achieve material success regardless of their upbringing/roots. Messner and Rosenfeld (2007) theorize that the unrestrained pursuit of the American Dream, the focus on the end goal and a relative de-emphasis on the means of achieving it, exerts pressures toward crime whereby people are encouraged to adopt an "anything goes" mentality in the pursuit of personal goals, creating an anomic cultural environment.

Contextual anomie/strain theory, developed by Robinson and Murphy (2009) and based upon Messner and Rosenfeld's institutional anomie theory, brings the idea of maximization, defined as, "the concomitant utilization of legitimate (i.e., legal) and illegitimate (i.e., illegal) means to achieve the goals associated with the American dream" (Robinson & Murphy, 2009, p. 3), to understand corporate crime. Simply put, maximization means abiding by the law and violating it at the same time. Like Messner

and Rosenfeld, Robinson and Murphy believe that the pursuit of the American dream promotes criminality through greed, strain, and anomie.

Maximization occurs when an individual or corporation utilizes strategies of “conformity” and “innovation” simultaneously. Conformity refers to the acceptance of both cultural goals and institutional means and by doing so defining non-criminal, law-abiding behaviors. Innovation refers to the acceptance of the cultural goals and rejection of the institutional means, leading to criminal type behavior. By using the concept of maximization, one exercises both legitimate and illegitimate means to pursue the American dream and by doing so steps into the role of “maximizer.” To fully become a maximizer, one must have not only the knowledge and skills, but the opportunity to engage in a legal trade as well as the knowledge, skills, and opportunity necessary to commit criminal behavior in fulfillment of the American dream.

Robinson and Murphy (2009) apply their concept of maximization to corporate crime, which they define as “illegal acts potentially punishable by criminal sanctions and committed to advance the interests of the corporate organization” (p.40). Their theory, contextual anomie/strain theory, focuses on elite deviance, or crimes of the powerful, which as noted in the introduction, can be just as or far more dangerous and common than ordinary street crime. They find that by taking concepts from anomie and strain theory, as well as institutional anomie theory, they can identify why elites use maximization to achieve their goals. Robinson and Murphy (2009) also explain that *greed* is central to contextual anomie/strain theory and maximization in two ways. First, all people are encouraged to be greedy simply by living in America, however, this does not mean all people are. And second, some people are encouraged to be even more

greedy as a result of the contexts or situations in which they find themselves. Large corporations, such as coal companies, fall into this category.

Maximization at the Upper Big Branch Mine

Applying the concept of “maximization” to the Upper Big Branch Mine disaster, one can argue that Massey Energy, owners of the Upper Big Branch Mine, displayed a corporate mentality that continuously placed the drive to produce above worker safety. In McAteer and colleagues (2011) report to the governor, the vast majority of miners testified in regards to the pressure to produce coal, and some even directly stated that Massey’s safety program, Safety One (S-1), took a back seat to Production Two (P-2). In the case of the Upper Big Branch Mine explosion, Robinson and Murphy’s concept of maximization, using illegitimate means, “innovation,” while at the same time abiding by certain laws, “conformity,” can be seen in several different instances. Production reports, injury reports, institutional secrecy, the idea that violations are a part of doing business, intimidation of workers, “nasty notes,” disrespectful written messages from the coal company president, and enhanced employment agreements are all forms of maximization that were used at Upper Big Branch.

Production reports. Production reports at the Upper Big Branch Mine were scheduled to be generated every 30 minutes regardless of whether coal was actually being produced. The level of production was then relayed up the Massey management chain to the headquarters of Massey Energy. In a case when production needed to be stopped because of a dangerous condition, such as inadequate ventilation, the section boss was instructed to write only “downtime” in his production report, rather than create a record acknowledging a potentially deadly situation. This type of production reporting,

combined with a certain lack of thoroughness in downtime reports, sent a very strong message to workers about what management considered most important.

Injury reports. At the Upper Big Branch Mine, there was a large safety board on the outside of the bathhouse with a space available to include the workers name when reporting injuries. Due to the very public display of this information, workers might have been inclined not to report the seriousness of injuries for fear of retaliation and intimidation from management, as well as other workers.

Institutional secrecy. Workers at Upper Big Branch were not kept informed of conditions in parts of the mine where they did not work. That type of information was kept on a “need to know” basis and only a few privileged workers knew what was going on throughout the mine. Miners, as well as section foremen, were not informed about any ventilation changes so they had no idea how the air was supposed to travel.

Violations are part of doing business. Massey Energy officials have repeatedly made public statements expressing their opinion that the number of violations issued against the company as well as the severity of those violations are all part of the cost of coal mining. At the same time, however, the company also maintained an ongoing public relations campaign where officials gave an indication that their mines exceed industry standards for workplace safety. And although this statement is not accurate, it was widely believed to be true by workers, especially those who had never worked for other mining companies.

To further call into question Massey’s assertion about its safety standards, between 2000 and 2009 MSHA proposed almost \$2,000,000 in penalties for violations at the Upper Big Branch Mine. To date, the company has paid just over \$650,000, which

amounts to only 33.3 percent of the total proposed because the company could repeatedly fight the violations. As a result of these challenges, Massey Energy has paid only a third of the assessed penalties over a ten-year period, while at the same time, continued to increase its profits.

Intimidation of workers. Miners working at Upper Big Branch testified that they were discouraged from stopping production for safety reasons and workers who questioned those safety conditions were simply told to get on with production. In one instance, foreman Brian “Hammer” Collins explained that he stopped his crew from running coal because he discovered inadequate ventilation when he did his pre-shift examination. Collins would not allow any work to start on his section until the problem was resolved. The entire process took about an hour to fix. The following day, when he arrived to work, he said Performance Coal Vice President Jason Whitehead suspended him for three days for “poor work performance.” Collins should have been commended for wanting to put the safety of his workers above production, but instead he was reprimanded.

“Nasty notes.” During the investigation following the explosion, miners mentioned receiving disrespectful written messages from Performance Coal President Chris Blanchard. They explained that if a crew did not complete a job during a shift, a nasty note would be waiting on the next shift. Glenn Ullman, a miner, described it as “some sarcastic note for all my men to see... [you’d] feel belittled” (McAteer et al., 2011, p. 100). Some firebosses and foremen said in an interview that they were going to “run coal right” and did not care if they were fired. Others, however, were intimidated by Blanchard’s “nasty notes” and did not say anything because they were “job-scared.”

Enhanced employment agreements. Massey Energy also used enhanced employment agreements to discourage workers from complaining about safety concerns or working conditions. Under the terms of these agreements, the company offered pay increases, bonuses, and guaranteed employment in exchange for employees' agreeing to work for a three-year period. If they voluntarily left or if their employment was terminated "for lack of performance as determined by management, unacceptable conduct...or a serious safety infraction," the miners had to return the enhanced pay and all of the bonuses received under the contracts (McAteer et al., 2011, p. 100). In addition, they could not work at any competitor's coal mine within a 90-mile radius of the mine where they had worked for one year after their employment with Performance Coal, owners of Massey Energy, ended.

Conclusions

This chapter has utilized the concept of the normalization of deviance as well as maximization to explain how the actions and omissions of the officials of Massey Energy resulted in the deaths of twenty-nine innocent miners. By letting miners continue to work in a mine with a faulty ventilation system, inadequate rock-dusting and poorly maintained equipment, Massey Energy officials put the need to turn a profit above the safety of their workers. Some of the greatest dangers we face come from acts not labeled as crimes (Reiman & Leighton, 2013) and in the instance of the Upper Big Branch Mine explosion, –that is most definitely the case.

The label "crime" is not used in the United States to name all or even the worst actions that cause misery and suffering. That particular label is reserved for dangerous actions often committed by the poor. Reiman and Leighton (2013) give the example of

an individual who boarded a commuter train and proceeded to shoot twenty-five people, killing six, who following the incident was labeled a murderer, potentially even a mass murderer. In the case of the Upper Big Branch Mine, however, Massey Energy officials, who knowingly disregarded safety regulations, are just thought of as individuals who lost employees in a tragic accident. Because an official does not intend to cause harm to his workers and because he is only indirectly responsible for death or disability, while pursuing legitimate economic goals, his acts are not labeled “crimes”.

Throughout my research and writing this thesis, I read numerous documents surrounding this particular case, and from those documents, I found that the label of “crime” and “criminal act” were only hinted at, particularly in any official state or federal report. These documents gave great detail about the event itself and what was believed the root cause to be, and even placed blame on the corporation, while at the same time explaining Massey Energy’s history of neglect for safety regulations. The official reports, particularly McAteer and colleagues Report to the governor, never once used the words crime or criminal act. As I was reading numerous media accounts of this incident, I found something only slightly different. They were using the discourse of crime and criminal act but only in regards to the criminal prosecutions of certain former Massey Energy officials. And in those cases, officials were only being charged with faking documents, lying to investigators and destroying evidence.

Not one piece of literature labeled Massey Energy as a murderer for killing twenty-nine innocent miners. I believe that Massey Energy’s knowing disregard for safety regulations coupled, with its desire to generate a profit by producing as much coal as possible, is the root cause for the Upper Big Branch Mine explosion.

Chapter Five: Tragic Accident or Corporate Crime?

The following chapter will begin by explaining what actually constitutes a crime, and what is needed in order for an act to be considered criminal. It will then briefly describe the Corporate Manslaughter and Corporate Homicide Act of 2007 enacted by the Parliament of the United Kingdom, which I believe would be a very useful piece of legislation in the United States. Finally, this chapter will explain any changes to the law following the Upper Big Branch Mine explosion.

What Constitutes a Crime?

To date, no Massey Energy official has been held criminally responsible for the deaths of the twenty-nine miners who lost their lives in the 2010 explosion at the Upper Big Branch Mine in West Virginia. What if we consider the fact, however, that 100,000 Americans die annually from occupationally related diseases? Do these constitute crimes? Officially, these deaths and the human suffering induced by willful neglect for worker safety are not considered crimes. One observer has even argued that these deaths caused by occupational injuries and diseases should be considered as criminal, as murders.

By any legitimate criteria corporate executives who willfully make a decision to expose workers to a dangerous substance which eventually causes the death of some of the workers, should be considered murderers. Yet no executive has ever served even a day in jail for such a practice, and most probably are well rewarded for having saved the company money.

The regulatory apparatus that is complicit with such practices should of course be considered an accomplice.” (Joel Swartz, an observer, as cited in Simon, 1982, p. 113)

Nevertheless, in most cases, corporate officials and executives are not held criminal liable because the actions executed do not establish the required *mens rea*, or criminal intent, component to secure a conviction.

Even though laws are different throughout the world, most countries and states differentiate between murder and manslaughter, including the state of West Virginia. According to Black’s Law Dictionary (9th ed. 2009), “murder” is defined as the killing of a human being with malice aforethought, or simply the intent to kill or inflict bodily harm, while” manslaughter” is the unlawful killing of a human being without malice aforethought. In the case of the Upper Big Branch Mine disaster, because Massey Energy officials did not specifically intend for their actions to result in the deaths of the twenty-nine miners, it does not mean that they should not be held criminally culpable for those actions.

“Culpable homicide,” originally a Scottish law, is defined by Black’s Law Dictionary as “a wrongful act that results in a person’s death but does not amount to murder.” The idea of culpability simply describes the level of one’s blameworthiness in regards to the commission of a crime. According to Robinson (1980) there are five defined levels of culpability: “purposely,” “knowingly,” “recklessly,” “negligently,” and faultlessly or “absolute liability” (Robinson, 1980). Known as culpable homicide in Scotland, the United States employs the term “criminally negligent homicide” or

manslaughter. Criminally negligent homicide results from the careless performance of a legal or illegal act in which the danger is apparent.

“Negligence” refers to the failure to meet the legal standards established in order to protect others against unreasonable risk of harm (Black’s Law Dictionary). In the case of the Upper Big Branch Mine disaster, an example of a negligent action would be the failure to follow all the safety regulations put in place by MSHA officials that were meant to protect the lives of workers in the mine in West Virginia. “Recklessness” is conduct by which the actors, in this case the Upper Big Branch Mine officials, do not desire harmful consequences but nonetheless foresee the possibility and consciously take the risk (Black’s Law Dictionary). By forcing miners to work with continuously failing equipment and in extremely hazardous conditions, officials of Upper Big Branch Mine were knowingly committing reckless actions. Criminally negligent manslaughter can also occur when there is an omission to act when there is a duty to do so (Black’s Law Dictionary). Mining companies are required to follow all safety regulations established to protect and ensure the safety of employees. The Upper Big Branch Mine was cited for more than 500 violations in the year prior to the 2010 explosion and failed to take that information and improve the conditions within the mine for workers. The failure to do so resulted in one of the worst mining accidents in forty-years.

Corporate Manslaughter

In cases where negligence and recklessness are evident, like at the Upper Big Branch Mine, it is difficult for prosecutors to convict an entire corporation for a criminal act. For an American corporation to receive a manslaughter conviction, the prosecution must show that one person who is the “controlling mind” of the company committed the

reckless or negligent acts or omissions which led to the accident and potential deaths (Corporate Manslaughter, n.d.). If convicted, the corporation is punished with the payment of fines and very rarely any jail time. Corporations commit crimes in all parts of the world. Unlike in the United States, however, the Parliament of the United Kingdom decided that corporations should be held more accountable and liable for their actions and passed the Corporate Manslaughter and Corporate Homicide Act of 2007. This act created a new offense, deemed as “corporate manslaughter” in England, Wales, and Northern Ireland and “corporate homicide” in Scotland. Under this act, to establish criminal liability, the prosecution has to prove five things; (1) that the offender is a qualifying organization; (2) that the organization owed a relevant duty of care to the victim; (3) that actions or omissions caused the death of the victim; (4) that the death is attributable to conduct falling far below what could reasonably be expected of the organization in the circumstances (gross breach); and (5) that the organization’s activities were managed by its senior management in a way that constituted a substantial element in the gross breach (Gobert, 2008). To date, the United Kingdom has successfully convicted four corporations under the Corporate Manslaughter and Corporate Homicide Act of 2007. Even with the success of this act in the United Kingdom, the United States has yet to follow suit and enact this piece, or any new piece of legislation.

Changes to the Law Following the Upper Big Branch Mine Disaster

Following a major mine disaster, Congress, often enacts a new piece of legislation that focuses on improving the failures that led to the disaster. In contrast to previous mine disasters mentioned throughout this thesis, however, the Upper Big Branch disaster has yet to yield passage of new legislation. This was not for lack of trying by several

Democratic Representatives. California Representative George Miller proposed the Robert C. Byrd Mine Safety Protection Act of 2010 following the disaster at the Upper Big Branch Mine. This bill, H.R. 6495 (2010), would have amended the last piece of mine legislation, the Federal Mine Safety and Health Act of 1977, to empower miners to raise safety concerns. Unfortunately this bill “failed under suspension” when it did not receive the 2/3 required vote to pass.

After failing to pass the first time, Representative Miller tried again the following year by introducing the Robert C. Byrd Mine Safety Protection Act of 2011. This act was exactly like the act proposed by Miller the previous year. Congress referred this bill, H.R. 1579 (2011) to the House Committee on Education and the Workforce. It died after no action to pass it was taken (H.R. 1579, 2011).

On March, 21, 2013, West Virginia Democratic Representative Nick J. Rahall joined forces with Representative Miller and introduced the Robert C. Byrd Mine Safety Protection Act of 2013 (H.R. 1373). This legislation, like the previous two, is aimed at strengthening the efforts to protect coal miners’ health and safety. This bill, however, would also require mine operators to maintain records of rock dust purchases so MSHA can verify efforts made by operators to prevent any build-up of explosive coal dust. In addition, this bill requires MSHA to develop a staffing succession plan to ensure that there are a sufficient number of trained personnel to help keep miners safe (H.R. 1373, 2013). At the time of this writing (June 2013), this bill has been referred to the House Committee on Education and the Workforce, where no decision has been made. Despite numerous efforts, however, this bill has only a one percent chance of getting past the committee (H.R. 1373 Govtrack).

The third anniversary of the Upper Big Branch Mine disaster recently passed as individuals continue to dedicate themselves to preventing such a catastrophic event from occurring again. Representative Rahall said it best:

while no piece of legislation can remove all of the dangers inherent in coal mining, we have a responsibility to advance sensible improvements in our national mine health and safety program that we know can save lives...we must not wait for further loss of life from a preventable tragedy to act to bolster our mine safety laws that we know are inadequate...this legislation is an important step in making good on an obligation we have to the health and safety of our courageous miners and their families. (quoted in Nyden, 2013)

Conclusions

This thesis has described what MSHA officials believe to be the cause of the explosion, a spark that ignited methane gas and that was fueled by coal dust that had built up throughout the mine. This thesis has also described the failures of the three main basic safety systems that were there to protect the lives of the miners. Finally, this thesis provided details about Massey Energy's history of mining disasters. Massey Energy frequently put the need to produce coal to make a profit above the safety of their workers, and this thesis provides great detail supporting that fact, particularly at the Upper Big Branch Mine.

Massey Energy was cited over 500 times in the year prior to the 2010 explosion, most of which were tied up in appeals, allowing them to postpone or even disregard any changes needed based on the citations given. Legislation passed prior to this explosion

did not prevent mining companies from this, and since the explosion no new piece of legislation has been passed, though several attempts have been made. Not updating the laws and changing things to help better protect the miner shows a lack of care on the part of state and federal officials.

Despite investigations following the explosion, no criminal charges were filed against Massey Energy for the deaths of the twenty-nine miners. The actions of Massey Energy officials at no point have ever been deemed as criminal. Rather than think of this event as a crime because officials knowingly allowed work to continue in unsafe conditions, it is thought of as just another tragic coal mine accident. Not placing the blame for the deaths of the miners on Massey Energy shows a coal mine disaster has always been and will always be thought of as just a tragic, unpreventable accident.

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