



**BRIEFING BY DEPARTMENT OF LABOR,  
MINE SAFETY AND HEALTH ADMINISTRATION  
ON DISASTER AT MASSEY ENERGY'S  
UPPER BIG BRANCH MINE-SOUTH**



## **Purpose and Scope of Report**

This report for the President is presented by the Secretary of Labor and the Assistant Secretary for Mine Safety and Health. It is a *preliminary* report that summarizes the facts we believe to be accurate as of today, with the caveat that the Mine Safety and Health Administration (MSHA) has just begun its investigation as to what went wrong at the Upper Big Branch Mine.

The investigation process began once rescue and recovery operations were complete.

MSHA will issue a final report after a thorough and comprehensive review of the physical evidence, mine records and other documents, and statements from miners, management and government inspectors.

Nothing in this preliminary report should be viewed as presupposing the results of MSHA's investigation, and nothing in this report should be viewed as overruling or conflicting with the statements of fact and conclusions that will be contained in the final report. The final report will be the official view of MSHA as to what went wrong and why.

## **Part 1: Fatal Explosion at Massey's Upper Big Branch Mine**

On Monday, April 5, 2010, there was a catastrophic underground coal mine explosion at Performance Coal Company's Upper Big Branch Mine-South in Montcoal, West Virginia. Performance Coal Company is a subsidiary of Massey Energy.

Carbon monoxide alarms at the mine were triggered at 3:02 pm, indicating this was the likely time of the explosion that killed 29 miners and put two survivors in the hospital. Initial reports indicate that the explosion was massive. Some miners in parts of the mine unaffected by the blast reported strong currents of air pushed by the explosion as far as five miles from the most likely explosion site.

The accident investigation team will evaluate all aspects of this accident and identify the cause of the disaster. Based upon the initial reports from the mine rescue teams, the most extensive damage appears to have occurred in and near active working sections of the mine. The rescue teams reported mining equipment severely damaged in these areas. Every miner working in this area was believed to have been killed instantly.

While the cause of this specific explosion is still being determined, most mine explosions are caused by the combustion of accumulations of methane, combined with combustible coal dust mixed with air. Methane naturally occurs in coal seams, and coal dust is generated from the mining process. Because these combinations are so dangerous, MSHA requires every mine to ensure (through ventilation and rock dusting) methane and coal dust levels remain below the point at which they become combustible. In some cases, an initial blast can cause coal dust from the walls and floor of the mine to become suspended in the air, propagating the explosion. Historically, blasts of this magnitude have involved propagation from coal dust. When methane and coal dust levels are controlled, explosions from these sources can be prevented.

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Explosions in coal mines are preventable. Mine operators use methane drainage and adequate ventilation to minimize methane concentrations. Operators can add sufficient rock dust to counter the explosive potential of coal dust. Operators can eliminate ignition sources, like electrical equipment that shed sparks. Barriers can suppress propagating explosions to mitigate their effects. But while mitigation efforts are laudable, the best approach is to prevent mine explosions from occurring in the first place.

### **The Aftermath of the Upper Big Branch Explosion: Rescue and Recovery Efforts**

The explosion at the Upper Big Branch Mine occurred at or around the time of a shift change. It killed miners in and around two working sections of the mine. It also killed

and injured miners who we believe were traveling from the working sections at the end of their shift.

Following the explosion but prior to rescue teams arriving, miners already in the mine reportedly proceeded deeper into the mine to search for survivors. They found 2 miners who would survive the explosion, and 7 who did not survive, but determined from carbon monoxide levels that it was unsafe for anyone other than trained rescue teams with oxygen masks to continue further. As such, they withdrew from the mine. Massey would ultimately determine within the first few hours following the explosion that 22 miners were unaccounted for.

At approximately 3:27 pm, MSHA records indicate the company alerted the Mine Safety and Health Administration (MSHA) and the West Virginia Department of Miners' Health, Safety and Training of the explosion. Immediately, over 20 mine emergency rescue teams from Massey, other coal companies in the region, the state, and MSHA responded to the disaster, with the first rescue teams going underground at approximately 5:30pm. Due to the extensive damage from the explosion, the rescue teams reportedly had to proceed more than a mile on foot to reach the working section.

Within the first 10 hours following the explosion, the rescue teams had found 18 victims in the Upper Big Branch Mine, in addition to the 7 dead and 2 injured miners evacuated by fellow miners immediately following the explosion. Rescue efforts continued in the early morning hours of April 6, but were suspended when rescuers reported encountering heavy smoke, methane, and carbon monoxide. Rescuers started drilling boreholes to clear the air inside the mine before the rescue teams reentered the mine.

Mine rescue teams made additional efforts to enter the mine the early in the morning of Wednesday, April 7, the night of Thursday, April 8, and early in the morning of Friday, April 9. Each time they were forced to exit before the final four miners were found. Finally, during the evening of April 9, the final four miners were found -- three in the longwall 22 section, and one in the longwall headgate area. A total of 29 miners died as a result of the explosion, and one remains hospitalized.

## **Part II: The Record of Extensive and Serious Safety and Health Violations at Massey's Upper Big Branch Mine**

Federal law places the responsibility for compliance with safety and health standards on mine operators. It also gives individual miners and their representatives specific rights and protections to voice concerns about working conditions at their mines.

MSHA is charged with enforcement of mine safety and health standards. Under the Mine Act, MSHA inspects all underground mines at least four times annually and all surface operations at least twice annually. The Act requires inspectors to cite all violations they observe. MSHA also investigates all fatal accidents and miner complaints of hazardous conditions or discrimination (e.g., retaliation for raising a safety or health complaint).

### **Massey's Upper Big Branch Mine: Non-Compliance with the Law**

The Upper Big Branch Mine-South is an underground bituminous coal mine, controlled by Massey Energy Company and located near the unincorporated town of Montcoal in Raleigh County, WV. The mine employed an average of 195 persons in calendar year 2009 and reported 1,235,462 tons of coal production. Between 1998 and 2003, three miners died in separate accidents at the Upper Big Branch Mine.

In 2006, MSHA inspectors issued an increased number of citations to Upper Big Branch because of a marked spike in the number of violations. Those violations included an alarming increase in the kinds of serious problems that required miners to be removed from portions of the mine. In December 2007, MSHA informed the mine it could be placed into "pattern of violation" status if it did not take steps to reduce its significant and substantial violations. This status would have given MSHA a powerful enforcement tool, enabling it to put the mine under more intensive supervision and order the withdrawal of miners from an area with any significant and substantial (S&S) violation until that violation was fixed. However, the mine then reduced its levels of serious violations in a successful effort to avoid being placed into that status.

Upper Big Branch mine again experienced a significant spike in safety violations in 2009. MSHA issued 515 citations and orders at the mine in 2009 and another 124 so far in 2010. MSHA issued fines for these violations of nearly \$1.1 million, though most of the fines are being contested by Massey.

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The citations MSHA has issued at Upper Big Branch have not only been more numerous than average, they have also been more serious. Over 39% of citations issued at Upper Big Branch in 2009 were for "significant and substantial" (S&S) violations. In some prior years, the S&S rate at Upper Big Branch has been 10-12% higher than the national average.

In what is perhaps the most troubling statistic, in 2009, MSHA issued 48 withdrawal orders at the Upper Big Branch Mine for *repeated* significant and substantial violations that the mine operator either knew, or should have known, constituted a hazard. Massey failed to address these violations over and over again until a federal mine inspector ordered it done. The mine's rate for these kinds of violations is nearly 19 times the national rate.

In 2007, MSHA implemented the current version of the "pattern of violation" program to identify the mines with the worst safety records in the country and to place them into an enhanced enforcement regime. The first step of that process is placing mines into a "potential pattern of violation status." Since the current screening process began in 2007, Massey mines have been placed onto potential pattern of violation status, the first step in the pattern of violation process, 13 times. This number represents 35% of the 53 coal operations sent potential pattern of violation letters. In October 2009, three of the 10 operations that received letters were owned by Massey.

In fact, but for a computer program error, Upper Big Branch would have been placed into potential pattern of violation status in October 2009 due to the number of significant and substantial violations in 2008 and 2009. (The error involved the program that is used to determine whether a mine met the criteria to be included into potential pattern of violation status.) But even if MSHA had discovered the error in time to place this mine on potential pattern of violation status, the current system allows an operation to avoid going into pattern of violation status if the operation reduces its significant and substantial violations by more than 30% within 90 days. Upper Big Branch did this in late 2009, and as a result, they would have avoided pattern of violation status even if the computer programming error were caught. While this computer program error has been fixed, it highlights a problem with the pattern of violation program: ultimately, even if this mine with its troubling safety record were included in the potential pattern of violation status, the current rules make it relatively easy for mines to avoid being placed into pattern of violation status.

Despite the 515 citations and orders issued at Upper Big Branch, three other Massey mines had more citations. In short, this was a mine with a significant history of safety issues, a mine operated by a company with a history of violations, and a mine and company that MSHA was watching closely.

### **Part III: MSHA's Efforts to Force Massey's Upper Big Branch Mine to Comply with the Law**

MSHA is required to inspect underground mines at least four times each year, and often inspects mines with a record of violations more often. From 2007 until today, MSHA has steadily increased its enforcement presence at Upper Big Branch Mine. In 2007, MSHA spent 135 days inspecting the mine. By 2009 inspectors were at the mine 180 days.

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Even at a mine with a safety record like the Upper Big Branch, MSHA lacks the legal authority to force the mine to *permanently* close. In specific circumstances MSHA can only *temporarily* withdraw miners from areas of a mine. Furthermore, MSHA can only stop mining operations in the area of a mine where a hazard exists, and only until the violation that led to the closure has been abated.

There are four circumstances in which the law authorizes MSHA to withdraw miners or equipment for safety or health violations:

1) MSHA can withdraw miners from a mine, or a section of a mine, if an inspector finds a condition which presents an “imminent danger.” The withdrawal order remains in effect until the hazard is abated.

Since 2000, MSHA has issued five imminent danger orders that terminated at least some mining operations at the Upper Big Branch Mine. The last order was issued in 2009.

2) If MSHA finds a violation, it issues a citation to the mine operator. If that violation is not abated within a prescribed period of time, MSHA can stop mining operations by withdrawing miners from the affected portion of the mine until the operator corrects the condition and MSHA ensures that the hazard no longer exists.

Since 2000, MSHA has issued 17 of these withdrawal orders at the Upper Big Branch Mine. Four of these orders were issued in 2009, and one in 2010.

3) If MSHA finds that a violation was the result of the operator’s “unwarrantable failure” to comply with a safety rule, MSHA puts the operator on notice that it must exercise more diligence to find and fix safety violations before MSHA finds additional violations. An “unwarrantable failure” means that an operator knew or should have known that the particular action or failure to take action was in violation of health and safety rules. If further MSHA inspections reveal additional “unwarrantable failure” violations, MSHA can immediately issue orders withdrawing miners from the affected area of the mine until MSHA determines that the violation is abated.

Since 2000, MSHA has issued 17 withdrawal orders at the Upper Big Branch Mine based on unwarrantable failures. The last order was issued in 2009.

MSHA has issued an additional 62 withdrawal orders at the Upper Big Branch Mine based on repeated, unwarranted activity since 2000. The bulk of these withdrawal orders occurred recently. Since 2009, 58 withdrawal orders of this type have been issued.

4) MSHA does not have the authority to shut down a mine based upon a set number of violations. However, MSHA does have the authority to place a mine into a “pattern of violation” category based upon a number of criteria including the number of serious violations in a 24 month timeframe.

In 2007, in response to a spike in significant and substantial violations in the previous 24 months, MSHA notified Upper Big Branch that it was being placed on “potential pattern of violation” status, the first step in the pattern of violation process. If a mine ultimately ends up in “pattern of violation” status, MSHA can issue withdrawal orders for every serious violation until each violation is fixed. This is a significant event, and one that mine operators are careful to avoid.

Under the existing MSHA policies, once an operation is placed into “potential pattern of violation” status, the operation is given an opportunity to reduce its levels of violations by 30%, or below industry averages for comparable mines. If the operation fails to do so, it will be placed into “pattern of violation” status.

The Upper Big Branch Mine was placed into a “potential pattern of violation” category in 2007. Massey quickly reduced its level of adjudicated serious and significant violations by more than 30%. As such, MSHA removed Upper Big Branch from the potential pattern of violation status in 2008.

One tactic used by mines with troubling safety records to avoid potential pattern of violation status is contesting large numbers of their significant and substantial citations. Because MSHA uses only final orders to establish a pattern of violations, and the average contested citation takes over 500 days to adjudicate due largely to a 16,000 case backlog at the independent Federal Mine Safety and Health Review Commission (FMSHRC), contesting large numbers of significant and substantial violations enables operators with troubling safety records to avoid potential pattern of violation status. In fact, the Upper Big Branch Mine contested the majority of its serious violation citations that form the basis of the pattern of violation status determination. In 2007 alone, the mine contested 97% of its significant and substantial violations.

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Companies' use of litigation to avoid a pattern of violations finding removes an important tool from MSHA's toolbox, and forces the agency to rely on citations and the threat of fines as its primary tool to encourage even the most problematic mines to reverse their safety problems. While operators are required to fix the hazards while citations are pending, MSHA must respond to violations one at a time. MSHA can fine operators – in this case over \$1.1 million since January 2009 -- and it can require an operator to remove miners from hazardous conditions until they are fixed. However, its tools to respond to systemic problems at a mine under current policies are much more limited.

The policies this Administration inherited make it relatively easy for operators like Massey to avoid pattern of violation status. In fact, MSHA has been able to place only one mine into pattern of violation status, and that order was revoked when one of the violations on which it was based was thrown out through the contest process. As

 Assistant Secretary for Mine Safety and Health Joe Main mentioned in his congressional testimony on February 23, 2010, MSHA has been reviewing potential changes to the pattern of violation rules to make it more difficult for operators to avoid being placed into pattern of violation status.

## **Part IV: Preliminary Proposals for Reforming Mine Safety Laws and Practices**

The Department of Labor and MSHA are committed to taking action now to stop reckless mine operators from, risking the lives and health of their workers. . Some of these steps are within our own power, requiring changes in regulations or our own practices. Other steps, however, will require actions by Congress. All of these steps can be taken without undermining the activities of the many mining companies that responsibly protect their workers' health and safety.

### Overview

Today, some mine operators can consistently engage in dangerous violations of the law, and then avoid penalties by aggressively contesting every citation. DOL recommends immediate action to change these companies' behavior by:

- Strengthening MSHA's capacity to investigate, prevent, and punish dangerous wrongdoing;
- Enhancing miners' ability to protect themselves; and
- Bringing cases to justice with greater speed and certainty.

These recommendations are preliminary. These steps will not address every problem in mine safety enforcement and regulation. Instead they are a starting point for the important and difficult discussions to come about how the federal government, working with our partners in state governments and stakeholders in the mining industry, can better prevent catastrophic accidents like the Upper Big Branch Mine disaster from ever happening again.

### Compel Chronic Violators to Provide for the Health and Safety of Their Employees

- Streamline the criteria for placing mines into the POV program;
- Consider greater use of other authorities for stopping scofflaw mine operators, such as injunctive relief.

### Give MSHA and Prosecutors More Tools to Investigate and Punish Wrongdoing

- Empower MSHA to use subpoena authority to require companies and individuals to turn over information promptly when needed;
- Enhance criminal penalties so that knowing violations of key safety laws are felonies, not misdemeanors.

### Empower Miners to Protect Themselves

- Support statutory changes that would enhance whistleblower protections for miners.
- Enhance the law so that miners do not lose pay while a withdrawal order is in effect.

- Build on recent improvements in the transparency of MSHA data, so that before an accident occurs, miners and the public can easily use MSHA reports and data to identify companies that must improve their safety practices.

#### Bring Chronic Violators to Justice More Quickly

- Eliminate the backlog of cases before MSHA, building on the Administration's proposed 27% increase in FMSHRC's budget this year
- Require mine operators to put significant penalty amounts into escrow, and otherwise ensure that contesting cases for the sake of delay does not pay.

DOL does not believe this is an exhaustive list of steps that should be taken in the coming weeks and months to protect the country's coal miners and their families.

Other critical steps must be taken - particularly in requiring mines to take specific steps to address controlling mine gases like methane and coal dust through rock dust, and ensuring mines properly plan to prevent safety and health hazards. DOL is now reviewing the full range of legal and regulatory authorities, as well as management reforms, to determine steps to ensure that another disaster like the explosion at the Upper Big Branch Mine does not happen again.