

Union carbide behind gauley bridge



**ASSIGN
BUSTER**

The Gauley Bridge, West Virginia, was America's greatest industrial catastrophe and has been hidden from most of the American public today. [1]In retrospect, it is incredible that the story of the digging of the tunnel near Gauley Bridge did not break until 1935.[2]Although much controversy was to surround the calculation of the project's human cost, a U. S. Public Health Service official testifying before a Congressional committee in 1961 put it at 476 dead and 1, 500 disabled. Yet it took five years from the time construction began for nationwide attention to focus on the tragedy, and the full facts did not emerge until a year later in the course of a Congressional hearing.

The deadly lung disease silicosis is caused when miners, sandblasters, and foundry and tunnel workers inhale fine particles of silica dust-a mineral found in sand, quartz, and granite. In 1935, approximately 1, 500 workers-largely African Americans who had come north to find work-were killed by exposure to silica dust while building a tunnel in Gauley Bridge, West Virginia.

Ordinarily, silicosis takes a several years to develop, but these West Virginia tunnel workers were falling ill in a matter of months because of exposure to unusually high concentrations of silica dust. The crisis over silicosis suddenly became a national issue, as seen in this article in the radical newspaper *Peoples' Press* .[a]In 1936 congressional hearings on the Gauley Bridge disaster, it was revealed that company officials and engineers wore masks to protect themselves when they visited the tunnel, but they failed to provide masks for the tunnels themselves, even when the workers requested them.

I can see that all of this was because a rich and powerful corporation valued dollars above lives. When the Rinehart & Dennis, Co., contractors for the

New-Kanawha Power Co., started tunneling through two mountains a mile east of Gauley Bridge, on a power project to cost millions, they had know the tunnel would go through silicate rock.

They knew that men working in the tunnel would breathe in the dust.

They knew that without protection they would get silicosis, deadly lung disease.

Behind Rinehart & Dennis was the New-Kanawha Power Co., set to build the tunnel, dissolved as soon as the tunnel was completed late in 1934.[3]

Union Carbide

Behind the New-Kanawha Power Co. is the Electro Metallurgical Co. This is the big company that will use and sell the New Kanawha power.

Behind the Electro Metallurgical Co. is the Union Carbide & Chemical Co., gigantic company spreading into many fields.

Power to be won from the mountains and the rivers of West Virginia was behind the building of the tunnel at Hawk's Nest, near Gauley Bridge. Dams, powerhouses, and a tunnel through the mountains to increase the drop in the New River and the force of the waterpower-a huge project, with huge profits to be made, from the power and the enormous silicate deposits.

A huge project was started in 1926, not yet completed, though the death tunnel is done.

Millions have been spent-\$20, 000, 000 already.

<https://assignbuster.com/union-carbide-behind-gauley-bridge/>

Engineers of the company had made tests. The mountains were full of silicate rock. Silicate-valuable, deadly if breathed into the lungs in large amounts.

No complete protection against silicate was known, when very fine, as in this case, but there were masks that helped. Ventilation shafts would carry some of the dust away.

Also, on the night of December 2, 1984, an accident at the Union Carbide pesticide plant in Bhopal, India, released at least 30 tons of a highly toxic gas called methyl isocyanate, as well as a number of other poisonous gases. Temporary huts or shantytowns that surrounded the pesticide plant lead to more than 600, 000 people being exposed to the deadly gas cloud that night. The gases stayed low to the ground, causing victims throats and eyes to burn, inducing nausea, and many deaths. Estimates of the death toll vary from as few as 3, 800 to as many as 16, 000, but government figures now refer to an estimate of 15, 000 killed over the years. Toxic material remains, and 30 years later, many of those who were exposed to the gas have given birth to physically and mentally disabled children. For decades, survivors have been fighting to have the site cleaned up, but they say the efforts were slowed when Michigan-based Dow Chemical took over Union Carbide in 2001. Human rights groups say that thousands of tons of hazardous waste remain buried underground, and the government has conceded the area is contaminated. There has, however, been no long-term epidemiological research, which conclusively proves that birth defects are directly related to the drinking of the contaminated water.[4]

Similar (The Space Shuttle Challenger Disaster)

Main Cause

The environmental and human decision making factors that were associated with the launching of the Space Shuttle Challenger on Jan. 28, 1986, the Challenge exploded shortly after liftoff, destroying the vehicle and all of its seven crew members, thus the cause of the problem as noted by Roger Boisjoly, chief engineer at Morton Thiokol was that due to the much cooler temperatures he found that both the primary and secondary-ring seals on the field joint had been blackened due to severe hot gas blowby. As he had recorded earlier in his studies that provided a direct correlation between low temperatures, and the concern that the O-rings on the shuttle's solid rocket boosters would stiffen in the cold losing their ability to preform well as a suitably seal.

“ The shuttle solid rocket boosters (or SRBs), are key elements in the operation of the shuttle. Without the boosters, the shuttle cannot produce enough thrust to overcome the earth's gravitational pull and achieve orbit. There is an SRB attached to each side of the external fuel tank. Each booster is 149 feet long and 12 feet in diameter. Before ignition, each booster weighs 2 million pounds. Solid rockets in general produce much more thrust per pound than their liquid fuel counterparts. The drawback is that once the solid rocket fuel has been ignited, it cannot be turned off or even controlled. So it was extremely important that the shuttle SRBs were properly designed. Morton Thiokol was awarded the contract to design and build the SRBs in 1974. Thiokol's design is a scaled-up version of a Titan missile, which had

been used successfully for years. NASA accepted the design in 1976. The booster is comprised of seven hollow metal cylinders. The solid rocket fuel is cast into the cylinders at the Thiokol plant in Utah, and the cylinders are assembled into pairs for transport to Kennedy Space Center in Florida. At KSC, the four booster segments are assembled into a completed booster rocket. The joints where the segments are joined together at KSC are known as field joints (See Figure 1). These field joints consist of a tang and clevis joint., which 177 clevis pins hold the tang and clevis together. Each joint is sealed by two O-rings, the bottom ring known as the primary O-ring, and the top known as the secondary O-ring. (The Titan booster had only one O-ring. The second ring was added as a measure of redundancy since the boosters would be lifting humans into orbit. Except for the increased scale of the rocket's diameter, this was the only major difference between the shuttle booster and the Titan booster.) The purpose of the O-rings is to prevent hot combustion gasses from escaping from the inside of the motor. To provide a barrier between the rubber O-rings and the combustion gasses, a heat resistant putty is applied to the inner section of the joint prior to assembly. The gap between the tang and the clevis determines the amount of compression on the O-ring. To minimize the gap and increase the squeeze on the O-ring, shims are inserted between the tang and the outside leg of the clevis.”[b]

In my opinion NASA should have delayed the launch, simply to explore the research that maybe Roger Boisjoly of Morton Thiokol' s theory held merit and was based of a scientific observation form such an expert in the field of Rocket Science.

Placing myself in that position, protocol would warrant a whistle-blower status as lives and multi-million dollars was a stake, not withholding the reputation of NASA and the Space Program overall. Without knowing the contractual obligation he had as an employee of a company that done work for NASA and the political hoops and legal ramifications that would follow, so out of the choices provided Resigning the position in protest is the only clear option, expect the end result would probably not change. Yet in my opinion Roger Boisjoly of Morton Thiokol did exactly what practically could have been done within reason considering the circumstances.

Similar (Water Disaster in Elk River, West Virginia)

Main Cause

In Elk River, West Virginia on January 9, 2014 a chemical spill various parties initiated numerous legal actions at both the state and federal levels.

Community advocates have been at the forefront of state legislation to register never before documented chemical storage tanks. Approximately 50, 000 tanks were identified for regulation, many of which were located along West Virginia's water supply. The spill's fallout and West Virginia's lead to create a chemical storage tank regulatory program set a precedent for several other states to enact their own chemical tank legislation and bills were proposed in halls of Congress and the U. S. Senate.[c]Despite immense public support, these West Virginia regulatory bills were already being dismantled by the next legislative session.

In addition to legislation intended to prevent similar crises, numerous criminal charges were filed against parties responsible for the spill. The U. S.

<https://assignbuster.com/union-carbide-behind-gauley-bridge/>

Attorney for southern West Virginia obtained 15 indictments for up to 93 years in prison against Freedom Industries' former president Gary Southern for charges including wire fraud. Although in an FBI-conducted investigation Gary Southern claimed no association with Freedom Industries, he ultimately pled guilty for violating the federal Clean Water Act, the Refuse Act, and negligent for failing to have a pollution prevention plan, and faces up to three years in prison and \$300, 000 in fines. Among five other Freedom Industries executives who pleaded guilty on charges related to the spill, Dennis Farrell, pleaded guilty to violating the Refuse Act and failing to have a pollution prevention plan, for which he faces sentencing of 30 days to two years in prison and up to \$200, 000 in fines.

Numerous civil suits have been filed in the aftermath of the crisis, including over 50 against West Virginia American Water in just the first nine months following the spill. Several personal injury suits as well as a class action lawsuit against Freedom Industries, its top executives, Eastman Chemical Company, West Virginia American Water, American Water, its parent company. In December 2015, Freedom Industries Farrell and Southern settled one such class action for \$50, 000 and \$350, 000 respectively

[1]<http://cstl-hcb.semo.edu/pgershuny/Gauley%20Bridge.htm>

[2]<https://www.youtube.com/watch?v=oUL6nnjO-6Q>

[3]<http://cstl-hcb.semo.edu/pgershuny/Gauley%20Bridge.htm>

[4]<https://www.britannica.com/event/Bhopal-disaster>

<https://assignbuster.com/union-carbide-behind-gauley-bridge/>

[a]<http://depts.washington.edu/labhist/laborpress/>

[b]<http://ethics.tamu.edu/Portals/3/Case%20Studies/Shuttle.pdf>

[c]<https://wwwatercrisis.com/>