

Questions to think about . . .

1. Was the Union Carbide factory in Bhopal, India a case of corporate exploitation of a developing country (opportunity to avoid environmental/safety regulations; cheap labor pool)? Or was it an effort to assist advancement of agriculture in a developing country (production of a critical input – carbaryl -- for agricultural pest control)?
 2. The December 1984 event at Bhopal, India has been described in many different ways. Was it a “tragedy”, a “catastrophe”, a “disaster”, a “crime”, or a “massacre”? What are the implications of each of these labels in terms of cause and responsibility?
 3. The 30th anniversary of the Bhopal event will take place in 2014. Do you think it will still be talked about? Why or why not?
 4. Can you think of any other hazardous chemical releases that have had or will have a long-term legacy? Explain.
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1984 - Huge Poison Gas Leak in Bhopal, India

By Jennifer Rosenberg, About.com Guide

<http://history1900s.about.com/od/1980s/qt/bhopal.htm>

Huge Poison Gas Leak in Bhopal, India (1984): During the night of December 2-3, 1984, a storage tank containing methyl isocyanate (MIC) at the Union Carbide pesticide plant leaked gas into the densely populated city of Bhopal, India. It was one of the worst industrial accidents in history.

Union Carbide India, Ltd. built a pesticide plant in Bhopal, India in the late 1970s in an effort to produce pesticides locally to help increase production on local farms. However, sales of pesticide didn't materialize in the numbers hoped for and the plant was soon losing money. In 1979, the factory began to produce large amounts of the highly toxic methyl isocyanate (MIC), because it was a cheaper way to make the pesticide carbaryl. To also cut costs, training and maintenance in the factory were drastically cut back. Workers in the factory complained about the dangerous conditions and warned of possible disasters, but management did not take any action.

On the night of December 2-3, 1984, something began to go wrong in storage tank E610 which contained 40 tons of MIC. Water leaked into the tank which caused the MIC to heat up. Some sources say that water leaked into the tank during routine cleaning of a pipe but that the safety valves inside the pipe were faulty. The Union Carbide company claims that a saboteur placed the water inside the tank, although there has never been proof of this. It is also considered possible that once the tank began to overheat, workers threw water on the tank, not realizing they were adding to the problem.

By 12:15 a.m. on the morning of December 3, 1984, MIC fumes were leaking out of the storage tank. Although there should have been six safety features that would have either prevented the leak or contained it, all six did not work properly that night. It is estimated that 27 tons of MIC gas escaped out of the container and spread across the densely populated city of Bhopal, India, which had a population of approximately 900,000 people. Although a warning siren was turned on, it was quickly turned off again so as to not cause panic.

Most residents of Bhopal were sleeping when the gas began to leak. Many woke up only because they heard their children coughing or found themselves choking on the fumes. As people jumped up from their beds, they felt their eyes and throat burning. Some choked on their own bile. Others fell to the ground in contortions of pain. People ran and ran, but they did not know in which direction to go. Families were split up in the confusion. Many people fell to the ground unconscious and were then trampled upon.

Estimates of the death toll vary greatly. Most sources say at least 3,000 people died from immediate exposure to the gas, while higher estimates go up to 8,000. In the two decades following the night of the disaster, approximately 20,000 additional people have died from the damage they received from the gas.

Another 120,000 people live daily with the effects from the gas, including blindness, extreme shortness of breath, cancers, birth deformities, and early onset of menopause. Chemicals from the pesticide plant and from the leak have infiltrated the water system and the soil near the old factory and thus continue to cause poisoning in the people who live near it.

Just three days after the disaster, the chairman of Union Carbide, Warren Anderson, was arrested. When he was released on bail, he fled the country. Although his whereabouts were unknown for many years, recently he was found living in the Hamptons in New York. Extradition procedures have not started because of political issues. Anderson continues to be wanted in India for culpable homicide for his role in the Bhopal disaster.

One of the worst parts of this tragedy is actually what has happened in the years following that fateful night in 1984. Although Union Carbide has paid some restitution to the victims, the company claims they are not liable for any damages because they blame a saboteur for the disaster and claim that the factory was in good working order before the gas leak. The victims of the Bhopal gas leak have received very little money. Many of the victims continue to live in ill health and are unable to work.

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Bhopal Gas Tragedy: Endless nightmare

Subodh Varma, Times of India Dec 3, 2009

<http://timesofindia.indiatimes.com/india/Bhopal-Gas-Tragedy-Endless-nightmare/articleshow/5294330.cms>

Twenty-five years have passed since that night of terror and death in Bhopal, which saw a cloud of deadly gases explode out of a faulty tank in a pesticide factory and silently spread into the homes of sleeping people. Although no official count of casualties has ever been done, estimates based on hospital and rehabilitation records show that about 20,000 people died and about 5.7 lakh suffered bodily damage, making it by far the world's worst industrial disaster ever.

Many who breathed the highly toxic cocktail that night suffered a horrible death with multiple organ failure. Those who survived have suffered multiple diseases for 25 years. A report of the Gas Tragedy Relief Department of the state says that the morbidity rate (occurrence of ailments) is nearly 20% among gas-affected persons compared to about 5% among the unaffected population.

Following the disaster, there was an international outcry for relief for the victims and punishment to those responsible for the gas leakage. The pesticide plant from where the gas leaked belonged to Union Carbide India, a subsidiary of the US-based Union Carbide Company. They were asked to pay compensation and arrange for medical treatment. The

matter immediately got embroiled in legal controversies. Thus began a long and painful struggle of the victims for compensation, medical attention and rehabilitation that has spluttered along for a quarter century.

In February 1989, the Supreme Court announced that it was approving a settlement for Bhopal victims under which Union Carbide agreed to pay Rs 713 crore for compensation to victims, while the government agreed to drop all criminal cases against it. However, due to intense public shock and anger at letting off the culprits, the court agreed to reopen the criminal cases in 1991. Two installments of compensation — of up to Rs 25,000 each — have been given till now to the injured, one in 1994 and the next in 2004.

N D Jayaprakash of the Bhopal Gas Peedit Sangharsh Sahyog Samiti (BGPSSS), one of the groups fighting for the rights of gas victims, calls this a massive fraud because the number of gas-affected persons was arbitrarily fixed by the government at 105,000, including about 3,000 dead. In reality, nearly 20,000 people have died, and 5.7 lakh have suffered injuries. The compensation amount — Rs 713 crore, paid by Union Carbide — was meant for about 1 lakh persons but has been distributed among nearly 6 lakh people. Of the Rs 713 crores, Rs 113 crores was for loss of livestock and property. The balance Rs 600 crore distributed among 5.74 lakh persons works out to about Rs 12,410 per victim on average. In contrast, in the Uphaar tragedy in Delhi, families of those who died got between Rs 15 lakh to Rs 18 lakh each, while injured persons got Rs 1 lakh each. In addition, they got interest at the rate of 9% per annum for the roughly six years that the legal proceedings took.

Stung by this injustice, the victims approached the apex court, which told them to approach the state government. In Bhopal, the Welfare Commissioner rejected their demand. They appealed to the MP high court. On November 30 this year, the HC too dismissed the petition. "We will go back to the Supreme Court," says Jayaprakash.

Even after 25 years, gas victims are suffering serious health problems. On an average, 6,000 gas-affected patients visit hospitals in Bhopal every day, that is, about 2 million visits per year. The government adopted a one-size-fits-all policy for categorisation of injuries — a person with compromised lungs may ultimately develop other diseases, besides being unable to work fully. But such distinctions were not maintained and meagre compensation was doled out. Sadhana Pradhan, who has worked among the gas victims since the disaster in 1984 points out that no line of treatment was ever evolved. "The government has treated the victims on an ad hoc basis," she says. Medical records are yet not centralized as recommended by the monitoring committee set up by the Supreme Court in 2004. As a result, doctors have no idea about the patients' history. "This has led to development of multi-drug resistant (MDR) TB in many cases," says Dr Saxena, who spent 11 years in the government's TB hospital in Bhopal.

Another dimension of the ongoing tragedy of Bhopal is the poisonous chemical waste lying around in the abandoned premises of the pesticide plant. Several committees have inspected it and found 44,000 kgs of tarry residues and 25,000 kgs of alpha naphthol lying in the open since 1984. Various studies have established that the soil, ground water, vegetables and even breast milk have traces of toxic chemicals.

Abdul Jabbar Khan of the Bhopal Gas Peedith Mahila Udyog Sangathan (BGP MUS) says that actually there is much more poisonous waste, which the company used to routinely bury in the premises since 1969. "There is no piped water supply. People still use contaminated groundwater daily," he says.