

The Bhopal disaster

December is the 30th anniversary of one of the world's most horrifying industrial accidents, writes **Tony Moore**. And the appalling legacy of the toxic cloud that blew over the town of Bhopal in 1984 continues to this day

On the night of December 2-3, 1984 about 30 tons of methyl isocyanine (MIC) escaped from a tank at a factory owned by Union Carbide India Limited (UCIL). The gas cloud blew over the town of Bhopal and, by the following morning, at least 1,000 people had died, as had large numbers of cattle, dogs, cats and birds. Most seriously affected were those who lived in the shantytowns in the area surrounding the plant.

Thousands of fatalities

The official death toll immediately following the disaster was 2,259 but, by 1991, had risen to 3,928. However, some estimate 8,000 fatalities within the first two weeks. Plant life was badly damaged, with widespread defoliation of trees. Thirty years later, it is thought that between 120,000 and 150,000 survivors of the disaster are still struggling with serious medical problems, including birth defects, gynaecological disorders, nerve damage, respiratory conditions, and elevated rates of cancer and tuberculosis.

The factory was built by an American company, Union Carbide Corporation (UCC), in 1969 to produce pesticide and MIC was one of a number of 'intermediates' used in the production process. UCC held a stake of 50.9 per cent; the remainder was owned by government-controlled banks in India (26 per cent) and approximately 24,000 private citizens in India.

The cause of the disaster is simple. Around 500 litres of water got into the MIC storage tank; the chemical reacted with the water and, at about 23:30hrs started leaking into the atmosphere. How the water got into the tank is fiercely debated. UCC is adamant to this day that it was sabotage and that a single disgruntled employee had deliberately introduced a large amount of water into the tank. The Indian government and local activists claim that it was corporate negligence in that underinvestment in



Hundreds of thousands of people still struggle with serious medical problems

safety equipment and procedures allowed for a dangerous working environment.

The company was accused of failing to replace faulty equipment – the automatic alarms on the MIC tank had not worked for four years and a vital piece of equipment on the flare tower didn't work for five months – a reduction in supervisory staff and a failure to invest in adequate training. It was alleged that 70 per cent of employees had been fined before the disaster for refusing, under management pressure, to deviate from proper safety practices.

One of a series of portraits taken for the Bhopal Medical Appeal: Nusrat Javed with three-year-old Zehra, who has Cerebral Palsy, rickets, lower extremity weakness and hyperextension of the knees.
www.bhopal.org

Alex Masi

UCC plants in the US and Europe carried out safety audits every year but only every two years elsewhere. In its audit of the Bhopal plant in May 1982, UCC found 61 hazards, 30 of them major, in the phosgene/MIC units. Many of these problems were rectified, albeit on a temporary basis, but UCC never performed a follow-up visit.

The 1984 audit was six months overdue. Three months before the disaster in India, an internal report on UCC's Virginia plant in the US, which was of similar design to the Bhopal plant, identified a number of defects and malfunctions. The report warned that if: "a runaway reaction (occurred) in the MIC unit storage tanks," then: "the planned response would not be timely or effective enough to prevent catastrophic failure of the tanks." The report was never forwarded to Bhopal.

Arguments and counter-arguments over a settlement, involving UCC, its lawyers, the US and Indian courts and both national governments, went on for five years. At one stage the Indian government was demanding US\$3.3 billion in restitution, but finally settled for \$470 million in 1989. Appeals carried on for another two years until the Indian Supreme Court upheld the \$470 million. Bureaucratic delays meant it was not until 2004 that the Indian Supreme Court finally ordered the Indian government to settle all victims' outstanding claims immediately.

In 1991, the Indian Supreme Court charged the CEO of UCC, Warren Anderson, with manslaughter but he never stood trial. In June 2010, seven former UCIL employees were convicted of causing death by negligence and each given the maximum punishment, being sentenced to two years imprisonment and a fine of about \$2,000; an eighth former employee was also convicted, but he died before judgement was passed.

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