

# The Bhopal disaster 1984

## – working conditions and the role of the trade unions

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### Background

The Bhopal Gas Leak, India 1984 is the largest chemical industrial accident ever. 520,000 persons were exposed to the gases, and 8,000 died during the first weeks. 100,000 persons received permanent injuries. The catastrophe has become the symbol of negligence to human beings on the part of transnational corporations. The direct cause of the gas leak in Bhopal was the large amounts of water that entered tank 610, containing 43 tonnes of methyl isocyanate (MIC). A run-away reaction started, which was accelerated by contaminants, high temperatures and other factors.

There are still different opinions as to the cause of the Bhopal disaster and as to who was responsible. According to the Union Carbide, it was sabotage by a disgruntled worker. However, analysis of causes and consequences show that irrespective of the direct cause of the leakage, there are only two parties responsible for the *magnitude* of the disaster: the Union Carbide Corporation and the Governments of India and Madhya Pradesh. The most important factors were plant design and economic pressure. The latter led to the deterioration not only of the safety systems but also of the staff policy, which in its turn contributed to the occurrence of the disaster. The governments not only failed to implement occupational safety regulations before the leakage, but also failed to provide adequate medical treatment and rehabilitation afterwards.

### Staffing policy

To be an operator at the MIC plant in the beginning, one had to be either a graduate in science or to hold a diploma in engineering. Later, eight weeks of training was enough. Workers and operators were given more responsibility than their training and competence equipped

them to cope with. In 1982, most of the original MIC operators had resigned. Workers from other plants were asked to take MIC plant training. After only 14 days of training in the MIC unit, they were asked to take charge of a regular plant operator's position independently. Secrecy issue hampered the workers' acquisition of knowledge. The manuals were kept in the safe custody of the manager. The plant operating manual was available only in English.

During the training period, technicians were treated as casual workers. After the training, they were only paid an hourly rate. A technician who accepted a job at the MIC plant got a paper about receiving six months of training, but after five weeks he was asked to stop the training and to take charge as a full-fledged plant operator. In the matter of promotions, individuals with little experience but with unquestioning loyalty to the bosses were invariably selected before others. A demand for extra safety precautions led to warnings that appointments could be terminated.

Contract workers without safety equipment did dangerous work that should have been done by machines. Workers and operators were routinely exposed to toxic chemicals such as MIC, carbon tetrachloride, trimethylamine, alpha-naphthol and carbaryl dust. They seldom had the equipment recommended in the manuals.

In 1983 and 1984 there were personnel reductions in order to cut costs. Workers were encouraged to take early retirement, 300 temporary workers were laid off, and another 150 permanent workers were put in a pool to be assigned to jobs as needed. The operating shifts were cut from twelve to six and the maintenance shifts from six to two. The positions of second-shift and third-shift maintenance supervisor had been

eliminated just a few days before the disaster. On the night of the disaster, there were no trained engineers on the site. The responsible production supervisor who was on duty had been transferred from a Carbide battery plant only one month before.

Operators were examined by the plant doctor every six months; examination included blood and urine tests. The employees were never told the results of these examinations. The management of Union Carbide India Ltd (UCIL) advised the workers to develop resistance against toxic substances by drinking six or seven glasses of milk a day and eating a high-protein diet of fish and eggs.

Company policy forbade employees to speak for the company without authorization, especially in emergency situations.

The personnel management policy led to an exodus of skilled personnel to better and safer jobs.

### Previous warnings

In 1976, the two trade unions reacted because of pollution within the plant. Letters were sent to the managers of the plant and the factory inspector as well as to the Ministry of Labour of Madhya Pradesh. They never received any answers. In 1981, a worker was splashed with phosgene. In panic he ripped off his mask, thus inhaling a large amount of phosgene gas; he died 72 hours later. The managers blamed the worker for removing his mask. The workers' union pointed out that it was the malfunctioning valve that led to the accident, and that the worker had not been provided with a PVC overall.

In January 1982, there was a phosgene leak, when 24 workers were exposed and had to be admitted to hospital. None of the workers had been or-

dered to wear protective masks. After this accident, the workers agitated for safer working conditions. In February 1982, an MIC leak affected 18 workers. In August 1982, a chemical engineer came into contact with liquid MIC, resulting in burns over 30 percent of his body. In October 1982, there was a leak of MIC, methylcarbaryl chloride, chloroform and hydrochloric acid. As an operator was opening a valve in an MIC pipeline, the joint linking it to several other pipes unexpectedly broke. In attempting to stop the leak, the MIC supervisor suffered intensive chemical burns and two other workers were severely exposed to the gases. During 1983 and 1984, leaks of the following substances regularly took place in the MIC plant: MIC, chlorine, monomethylamine, phosgene, and carbon tetrachloride, sometimes in combination.

### The night of the disaster

Those in charge of the MIC plant on the evening of 2 December were not familiar with the factory's complex maintenance procedures, and they knew nothing about MIC or phosgene. The supervisor was convinced that there could not be a leak as production had been stopped.

The supervisor from the day shift had left instructions on flushing the pipes leading from the MIC tanks to the vent gas scrubber with water. He forgot to mention the slip-binds that should have been placed at each end of the pipes. When the worker placed the stopcocks, he was not sure that they tightened completely, because of corrosion and rust. He cut off the water. The supervisor told him to clean the filters. When the worker turned on the water, it came out only through three of the four drain-cocks. He was told to keep the water running, and that the night shift would turn it off.

The workers maintain that entry of water through the plant's piping system during the washing of lines was possible because a slip-bind was not used, the downstream bleeder lines were partially clogged, many valves were leaking, and the tank was not pressurized. Carried with the water were iron rust filings from corroding pipe walls, residue of the salt compounds that had blocked the lines being washed, and other contaminants that speeded up the reaction.

### The role of trade unions

At the UCIL plant in Bhopal, the workers were organized in two competing trade unions. The management tried to use the rivalry to its advantage in contract negotiation. Not until 1984 was the Union Carbide Karmachari Sangh recognized.

The workers' unions reacted as early as 1976, because of the pollution within the plant (see above). After the leak in 1982, the trade union printed 6,000 posters with warning texts that were distributed throughout the community. The Hindu union leader went on a hunger strike at the entrance to the factory. The result was that all political and trade union meetings inside the factory were banned. One UC staff member burnt the principal union's tent. In the ensuing scuffle, several people were injured. The two trade union leaders were laid off. Meetings and processions were held throughout the city. As the UCIL staff regarded the plant as "one of the safest ships in the modern industrial fleet", the demonstrations were considered to be a campaign by agitators wanting higher salaries and shorter working hours.

After this, the union changed its focus from the potential danger to all workers and the surrounding neighbourhood because of hazardous design, to the need to protect individual workers. The national trade unions did not take any active part in the protests after the leakage of 1984. The trade union leaders were not arrested together with other activists in the June 1985 midnight scoop. It is said to be due to a deal, made with the police, that the unions would not take part in the demonstrations.

The Union Research Group in Bombay formed the Trade Union Relief Fund, to support the workers' struggle for alternative food production at the UCIL plant. In 1985, 400 people stormed into the plant to begin a sit-in to protest over job losses. The occupation of the plant did not end until December 1985, when UCIL made a large cash settlement with the workers. However, the campaign was criticized on various grounds.

When the Bhopal Gas Affected Women's Stationery Workers' Union marched to Delhi in 1988 to fight for their rights, they got no support from the trade unions in Delhi.

Observers from two international trade unions came to Bhopal after the leakage. This resulted in the report "The Trade Union Report on Bhopal", that was written "in response to our Indian affiliates".

Today, trade unions from across the world express solidarity with the cause of Bhopal gas victims. A joint appeal was issued in 2003 by trade union representatives from over 25 countries.

### Comments

Deficiencies in the management of UCIL can be summarized as follows:

- Lack of skilled operators because of the staffing policy
- Lowering of safety management because of staff reductions
- Insufficient plant maintenance
- Lack of emergency response plans.

The two main theories as to how the water entered the tank are the sabotage theory and the water washing theory. UC has pointed out contradictions in the statements from the witnesses.

However, sabotage would have been improbable if

- maintenance had been good
- the safety systems had been working
- the saboteur would have wanted to save his own life and health.

The local trade unions were the first to react to the hazards at the Bhopal plant. We do not know whether they were aware of the plans for closing down the plant. It is likely that there would have been forceful protests against the risks of unemployment, although from a public health and environmental perspective, closing down the plant would have been absolutely the best action.

### Literature

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