

Bhopal gas tragedy assignment

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This as an Industrial disaster with a complexity of violations of civil, political, economical social rights carried over a period of twenty years which necessarily demanded Unitarianism approach and called for corporate social responsibility (CARS) 2 The Bhopal gas tragedy on the night of 3 December, 1984, killed 15, 274 people. But those who were yet to be born, were left with a life worse than death. No compensation yet: On the night of December 3, 1984, three uniformed men stood tall to ensure that the maximum people could be saved from the world's worst industrial disaster. The sinuous methyl isocyanate gas left them with nausea, suffocation and red, watering eyes. But they had not a thought to spare for themselves – or their families back home. All three survived – but their health complications continue. And to add insult to injury, none of them were given any compensation, let alone recognition. Bhopal gas tragedy: 8 found guilty, get bail The seven Indian union Carbide India Ltd (CUIL) officials convicted in the 26- year-old Bhopal gas tragedy case have been granted bail and released on submission of a surety of RSI 25, 000 by a trial court in Bhopal, according to a Times Now report.

Earlier on Monday, eight accused, one of whom is deceased, were sentenced to two years in prison for causing death due to negligence. The Magistrate court in Bhopal on Monday convicted all eight Indians accused in the 1984 Bhopal gas tragedy case. A RSI 500. 000 fine has been imposed on CUIL. ?? Bhopal gas leak: Each victim has got around RSI 12000 What is the Bhopal Gas Disaster? The world's worst ever industrial disaster took place on the night of 2-3 December 1984, when a tank full of deadly methyl isocyanate gas exploded in a fertilizer plant owned by CUIL.

Over 40, 000 keg of the toxic, colorless gas wafted over the sleeping itty. People who breathed the gas suffered symptoms ranging from suffocation, blindness and vomiting to spontaneous abortions, lung, kidney, liver and brain damage. Initially, nearly 4, 000 people died and over a lake suffered injuries. Latest Could the disaster have been prevented? Investigations have shown that a series of negligent decisions by the management led to the explosion. The highly reactive gas is supposed to be kept at temperatures below ICC, under pressure.

However, the refrigeration system had been shut down since June 1984. The tank and valves that regulate gas flow were also defective. There Nas no safety system in place. There was no warning system for localities surrounding the factory. Lessons had not been drawn from earlier accidents in the same plant. It appears that the management cut corners to save costs. Have the victims been properly compensated? On 14 February 1989, SC announced that it had approved a settlement between the Central government and Union Carbide settling all compensation claims and criminal matters.

Under this deal, Carbide paid RSI 713 core as compensation. Of this, RSI 113 core was paid to those with damage to property or cattle deaths. The remaining RSI 500 core was to be distributed to kin of 3, 000 dead and 1 lake injured. The casualty figures were arbitrarily arrived at since no scientific survey was done. As it turned out, the number of dead increased to 20, 000 and number of injured shot up to 5. 73 lake. Since the compensation amount was already fixed and deposited, it was distributed among five times the number of victims.

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Thus, on an average, each victim has received Just RSI 12, 410. Two installments of compensation have been given till now to the injured. Neat happened to criminal charges against Carbide officials? In 1989, all criminal charges against Carbide were dropped. This led to such an uproar that in 1991, SC decided to allow reopening of cases. However, in 1996, the SC directed the charges be converted from culpable homicide (which carries a Max sentence of 10 years) to death due to negligence (with maximum sentence of two Hears). The accused included Warren Anderson.

Since Anderson was allowed to flee, Papal court issued a non-available warrant against him in 1992. After dragging its feet for 12 years, the government formally asked for his extradition in 2004. But the US government rejected the request. Disasters : A case study of Papal Gas Leak Disaster Industrial One of the most disastrous events since the history of chemical industry occurred in Papal, the capital city of Madhya Pradesh, on the night of December 02, 1984, in the factory of Union Carbide of India Ltd. (GUCCI L) due to leakage of Methyl Iso Senate (MIMIC) gas.

CULL, subsidiary of the multi national company Union Carbide Corporation (USA) was in the business of manufacturing agricultural pesticides among other things. MIMIC was required in these manufacturing activities and was therefore, manufactured and stored at the CULL plant in Papal. MIMIC has very special characteristics which make the chemical very hazardous. Some of the properties of the MIMIC are: It is extremely volatile and vaporizes very easily It can boil at a temperature of degrees C, so it is very important to be kept cool.

It is chemically very active and reacts violently with water. It is highly toxic, it is about 100 times lethal than cyanide gas. It is heavier than atmospheric air, it stays near the ground after release. The Disaster During the night of December 2-3, 1984, about 45 tones of MIMIC (Methyl ISO Senate) gas leaked from the CULL (Union Carbide of India Ltd.) plant at Papal. MIMIC was stored in the underground tanks, which became contaminated with water. The contamination produced chemical reaction, followed by a rise in gas pressure and a subsequent leak.

The chronology of the events leading to one of the most disastrous events in the history of chemical industry is as follows: Chronology of the Event 1 . December 2, 1984, was a routine day at the CULL factory in Papal 2 MIMIC was stored in an underground tank. The pipeline washing started at 9: 30 p. M. As a routine maintenance operation 3. Between 10: 30- 11: 00 p. M. : workers engaged in pipeline washing became aware of leak. Little attention was however paid considering it a normal leak. A casual attempt was made to trace the source of leakage, but of no use.

The leak continued. 4. Around 12: 15- 12: 30 a. M. : The pressure in the MIMIC tank about Upton 55 pounds per square inch (which was the maximum the gauge could read). The temperature had also shot up to 200 degree C and was increasing. An operator saw that the concrete above the tank was cracking. About 12: 30 a. M. , the relief valve of the tank gave away and large quantities of MIMIC gas leaked into the atmosphere. 5. The workers at the factory realized the risk of a massive disaster. They tried to activate the safety systems available at the factory at about 12: 30 a. M.

The three safety systems available within the factory and their condition at that time were as under: 7. Turning on the flare tower to burn off toxic gas. This system was not in working condition as a piece of pipeline leading to the tower had been removed for maintenance. Also not in an operational condition. LESSONS LEARNED Lessons learned Reduce inventory of hazardous material (MIMIC) Keep all the safety related equipment in order Keep residential areas away from the plant Proper Management :]Emergency training/response schemes awareness CONCLUSION Every business decision has safety consequences. A negative safety outcome is a negative business outcome. In order to do the right thing, politics and the local community must be assessed, understood, and protected. The Bhopal Gas Tragedy: Introduction In the early morning hours of December 3, 1984, a poisonous grey cloud (forty tons of toxic gases) from Union Carbide India Limited (Scull's) pesticide plant at Bhopal spread throughout the city. Water carrying catalytic material had entered Methyl Isocyanide (MIC) storage tank No. 10. What followed was a nightmare. The killer gas spread through the city, sending residents scurrying through the dark streets.

No alarm ever sounded a warning and no evacuation plan was prepared. As victims arrived at hospitals breathless and blind, doctors did not know how to treat them, as Union Carbide had not provided emergency information. It was only when the sun rose the next morning that the magnitude of the devastation was clear. Dead bodies of humans and animals blocked the streets, leaves turned black, the smell of burning chill peppers lingered in the air. Estimates suggested that as many as 10,000 may have died immediately and 30,000 to 50,000 were too ill to ever return to their jobs. The catastrophe raised

some serious ethical issues. The pesticide factory was built in the midst of densely populated settlements. CULL chose to store and produce MIMIC, one of the most deadly chemicals (permitted exposure levels in USA and Britain are 3.02 parts per million), in an area where nearly 120,000 people lived. The MIMIC plant was not designed to handle a runaway reaction. When the uncontrolled reaction started, MIMIC was flowing through the scrubber (meant to neutralize MIMIC emissions) at MIMIC in the tank was filled to 87% of its capacity while the maximum permissible was 50%.

MIMIC was not stored at zero degree centigrade as prescribed and the refrigeration and cooling systems had been shut down five months before the disaster, as part of Sac's global economy drive. Vital gauges and indicators in the MIMIC tank were defective. The flare tower meant to burn off MIMIC emissions was under repair at the time of the disaster and the scrubber contained no caustic soda. As part of Sac's drive to cut costs, the work force in the Pahal factory was brought down by half from 1980 to 1984. This had serious consequences on safety and maintenance.

The size of the work crew for the MIMIC plant was cut in half from twelve to six workers. The maintenance supervisor position had been eliminated and there was no maintenance supervisor. The period of safety-training to workers in the MIMIC plant was brought down from 6 months to 15 days. 3. Transferring the MIMIC from the tank into a nearby spare tank. The gauge of the spare tank indicated that the tank already contained something. This gauge indicator was found defective, later on. 10. After failure in all the three safety systems, the workers attempted to douse the caking gas with water spray.

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The water spray reached a height of 100 Ft. From the ground, while the leak was at 120, Ft. Above the ground. At 1. 00 a. M. , releasing that nothing could be done to stop the leak, the workers at the plant fled. 11 At about 1. 00 a. M. Thousands of people living around the plant were awakened by the suffocating, burning effects of the gas. As on three sides, the CULL plant was- surrounded by slums and other poor settlements, the people living in these colonies Nerve the worst sufferers. 12. There was no warning or guidance to the general public around this time. There

Nerve two types of alarms in the factory, one mild siren for workers and one loud public siren. The public siren was started only at about 2: 30 a. M. 13. About 2. 00 a. M. , a large number of people were rushing out of the town through the highways leaving Papal. The mad rush on the main roads of the city resulted in stampedes. About two lake people had fled the city by 3: 30 a. M.. The gas clouds dissipated around 3: 30 a. M.. 14. By 4: 00 a. M. Hospitals were crowded with suffering people. In the wake of the tragic disaster, a large number of people lost their lives and received injuries, many to their lungs and eyes.

According to the Government reports, 1754 persons had died and 200, 000 were injured. Ere real problem was the removal of dead bodies of livestock, which was still littered on the streets and houses of the affected areas. About 20 dumpers and six cranes Nerve pressed into service to remove 790 buffaloes, 270 cows, 483 goats, 90 dogs and 23 horses. During the burying operation of dead bodies, adequate Technological Did care was taken to check the spread of epidemic. Emergency Response and Relief Operations

Preparation for coping with a major accident of unprecedented dimensions affecting the surrounding communities like this one was minimal.

After the event the immediate response was chaotic and inadequate.

Information regarding the gas release was late and incomplete. The police and medical services were unaware initially that there had been a release of MIMIC gas. No one knew about the adverse effects of the gas release and the treatment methods of the affected persons. For the relief purposes of the affected persons a relief commission was created directly under the Chief Minister. Two additional collectors were made in charge of relief and rehabilitation respectively.

The main duties of the additional collectors included the proper field work coordination and to ensure the implementation of administrative directives. Various gas affected localities were divided into seven administrative zones. Each zone was under the administrative control of a deputy collector. The next of kin of the dead persons were paid immediate ex-gratia compensation of Rs. 10,000. The poor families in the gas affected wards were paid an ex-gratia of Rs. 1500. Wheat and rice were distributed free in the affected localities; The local administration faced problems in the absence of reliable socio-economic surveys