

§2.1 Assignment 2 Module A: Air

Without getting into a blame-game, write an essay on what in your understanding led to this industrial “accident” : Was it just a technical /funding issue ? Why in India? About 500 words.

A lot of factors including technical faults, funding issues, lack of social awareness, bad governance, capitalist attitude and politics caused the Bhopal Gas Tragedy. The sequence of events that caused this are described in the following paragraphs based on the documentary “BBC One Night in Bhopal (2004)”.

Union Capital built a factory in India. They had appointed a Medical Officer: Kumkum Saxena. Her job was to send Toxicological reports to the Company’s Headquarters. A lot of people worked in UC Plant maintenance since work was hard to find in Bhopal. The plant hosted large quantities of Methyl Isocyanate (MIC), which is unstable at high temperatures and gives an explosive reaction with water. Suman Dey was in charge of controlling the safety systems. He trusted the company’s reputation and hence believed that their safety measures were enough. Gases inhaled by the workers led to some medical cases to be reported to the hospital. Lungs collapse caused a young man to die of chemical exposure. The neighbourhood of the chemical plant was densely populated (beyond legal limits of having such a plant). This increased the severity that would be caused by any disaster. Shahid Noor, among many others, worked at the factory but was never aware of the actual chemicals being used in the plant. His family thought that the plant was producing fertilizers for plants instead of chemical pesticides. Kumkum raised her concerns regarding safety and lack of evacuation plans with her Senior Manager but he didn’t pay much attention to it. The Senior Manager was afraid that the workers would leave if they realized the dangers that the chemical plant posed to the population in case of an emergency. As a result of dissatisfaction with safety issues Kumkum left the job.

In 1984, drought caused the major market of Union Carbide’s miracle pesticide to decline. It had financial liabilities which caused them to cut down on workers and have less frequent safety checks to reduce their cost. 50 years of UC in India were celebrated even though the plant was not financially well. 2nd December 1984, was the celebration that pleased the people, just the day before the disaster. Suman Dey arrived for duty in the control room, but the number of supervisors was halved and he was working alone in the room. Outside the plant, the routine job was going on. Rehmat Khan was cleaning pipes of MIC storage tanks. He fired a jet of water into the system but forgot to use a small piece of metal: a slit plate that should be inserted in between the pipes to stop any leaking water to go into the MIC tanks, which otherwise would create a violent runaway reaction. There were leaking valves and no plate to prevent the water from going into the tank. Reaction caused an increase in temperature. A refrigeration system should have kept the MIC tanks cool and slowed down the reaction, but this was turned off. This was one of the four key safety systems to avert disaster to fail. Suman Dey received a call from the engineer. Smell of MIC was the first sign of error. Poisonous liquid turned into gas. Second safety system also failed: Gas scrubber could have neutralized the caustic soda but it was on standby. Massive leak in the MIC storage area followed. Alarm was barely heard in the city late at night. Moreover, plant managers turned it off to prevent panic (this was the third safety precaution to fail). There was a flare tower that could have been used to burn off the toxic gases before they could escape. However, this flare tower didn’t work and the gas spread into the city. These were caused by technical safety failures and lack of social awareness. However the severity of its impact was worsened by

the following.

The police were not informed by any of the company's employees. Another reason is that the leak happened at night, when it was the ideal time for maximum damage as people were not ready and would take time to become aware of what had happened. Swaraj Puri (Chief of the Police) was not prepared for this kind of emergency. Everywhere people were trying to run away causing chaos. Children getting crushed, people vomiting, eyes burning, miscarrying. Kumkum, who was the medical manager of UC, knew simple steps to stay safe: close windows, go against the wind but Union Carbide did not notify these to the public. Hamidia Hospital had too many patients. UC told the doctors that the gases are mere irritants, can use eggs, water and eye drops to prevent the irritation. At this stage, the company provided no information about the composition of the gas or any antidote. To find out the cause of deaths, autopsy reports are checked. This revealed that the fluids filled to collapse lungs. Trains were not coming or going. Officially 8000 died. 500,000 exposed to the gas. UC's financial liability? UC's chairman Warren Anderson decided to come to Bhopal to meet with the police chief. He asked Swaraj what had happened as if not knowing about the potential calamity. Swaraj arrested Anderson but after intervention by the US government, he was released on bail. UC's senior doctor released reassurance in a press release, saying that respiratory problems were treated by conventional cough syrups and drugs and the condition of many would improve within the next few weeks, despite knowing that they would be affected for many years to come. 1983, just a year before the disaster, UC had classified the chemicals by their potential danger and MIC was among those that posed the highest danger. UC never claimed responsibility for the disaster, brushing it off by saying that Bhopal plant was run by the Indian subsidiary, and that it was a sabotage. Internal reports for safety had warned of such a calamity in the MIC storage tank but this report was never sent to Bhopal's managers. In India, the population density of Bhopal, lack of social awareness and weak governance contributed to the disaster's severity. Reparations of at least thousands of crores should have been demanded from UC however the supreme court did not push for it. Anderson was also never extradited, showing the lack of power and will in the Indian government .