

Safety in Industry - Vishakhapatnam Gas Leakage and its effect on surrounding locality and legislations in India

In the wee hours of 7th May 2020, a pungent smell covered the entire locality of R. R. Venkatapuram village, situated on the outskirts of the coastal town of Vishakhapatnam. The resulting vapor cloud spread over a radius of about three kilometers, affecting the nearby areas and villages. Within a few hours, the people were seen rushing in panic, some carrying injured on their shoulders and unconscious bodies were lying on the streets.

As per the National Disaster Response Force (NDRF) the death toll was 11, and more than 1,000 people became sick after being exposed to the gas. The reason behind this chaos was found out to be a gas leak was from two 5,000-tonne tanks that containing styrene had lain unattended due to coronavirus lockdown in place since late March and the families in the surrounding villages were asleep at the time of gas leak.

The incident took place at the LG polymer plant situated near the locality. The incident happened when workers were getting the storage tank ready for operation. The storing of styrene, a chemical compound toxic to the brain and lungs is thought to be a possible cause behind the accident.

This type of incident is often attributable to the following reasons:

1. **Unsafe state of machinery & equipment**
2. **Lack of proper maintenance of storage tank**
3. **Dangerous behavior of the operators or negligence**
4. **Lack of a thorough safety management practice.**

Laws to Protect Against Chemical Disasters in India

❖ **Laws Before and During Bhopal Gas Tragedy (1984):**

- At the time of the Bhopal gas tragedy the **Indian Penal Code (IPC)** was the **only** relevant law specifying criminal liability for such incidents.

❖ **Laws After Bhopal Gas Tragedy (1984):**

- **Bhopal Gas Leak (Processing of Claims) Act, 1985** : It gives powers to the central government to secure the claims arising out of or connected with the Bhopal gas tragedy.
- Under the provisions of this Act, such claims are dealt with speedily and equitably.
- **The Environment Protection Act, 1986**: It gives powers to the central government to undertake measures for improving the environment and set standards and inspect industrial units.
- **The Public Liability Insurance Act, 1991**: It is an insurance meant to provide relief to persons affected by accidents that occur while handling hazardous substances.
- **The National Environment Appellate Authority Act, 1997**: Under this Act, the National Environment Appellate Authority can hear appeals regarding the restriction of areas in which any industries, operations or processes or class of industries shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act, 1986.
- **National Green Tribunal, 2010**: It provided for the establishment of the National Green Tribunal for effective and expeditious disposal of cases related to environmental protection and conservation of forests.
 - Any incident similar to the Bhopal gas tragedy will be tried in the National Green Tribunal and most likely under the provisions of the Environment (Protection) Act, 1986.
 - If an offence is committed by a company then every person directly in charge and responsible will be deemed guilty, unless he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such an offence.

This incident has proved that regulatory authorities and the government did not learn any lesson from the Bhopal gas tragedy in 1984 considered to be one of the world's worst industrial disasters.

Way Forward:

- **Develop safety culture**: There's a need to adopt proper safety measures following the best international standards. Three-tier measures are required, which involves

- Passive safety measures like having a green belt of trees around the periphery of industries should be adopted;
- Automatic sprinkling system and vent with scrubbing mechanism shall be provided to such hazardous tanks to reduce its effect on surrounding.
- Daily checklist and proper upkeep of safety system
- Industries should pre-announce to the local people if they use hazardous chemicals;
- Precautionary drills must be conducted by industries as a part of their CSR programs;
- Plant Inspection: Proper plant inspection should be done even during the closure
 - A proper audit of all plants must take place as prevention is better than cure and in this case, it is life-saving.
 - Monitor the health of cattle by bringing in teams of veterinary doctors.
- Fix Accountability: Maintenance of Hazardous Chemicals; Have strict legal actions and fix accountability after having a thorough investigation; State government should keep a check on the number of people living near hazardous industries and proper disaster planning must be adopted.

References:

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