

Deadly Gas Leak at LG Polymers Reveals Occupational Health and Safety Failures

On May 7, 2020, toxic Styrene gas leaked from the LG Polymers Chemical plant, a unit of South Korean LG Chem, near Visakhapatnam in the southern state of Andhra Pradesh, India. The gas leak has killed 12 persons and sickened more than 1,000 people, and has been covered widely in the media in India and globally as a tragedy reminiscent of the Bhopal gas tragedy 36 years ago. According to initial media reports, LG Polymers had been [operating illegally without environmental clearance](#) and had [failed to conduct safety and due diligence checks](#) before commencing operations after the COVID-19 national lockdown.

LG Polymers produces expandable polystyrene resin (EPS) which is widely used for packaging of electronics hardware. The factory also produces Engineering Plastics Compounds which is used as an industrial raw material in the electronics industry. It is used for injection moulding various plastic [components](#) used in networking systems, computers, printers, headphones and mobile phones.

According to a media report released on May 11, 2020, Andhra Pradesh forensic science experts have cited human error and negligence as the reason behind the gas leak. Lack of adequate maintenance during the lockdown period which lasted for over a month in India could be a contributing factor. Failure to add auto-polymerisation inhibitors into the tanks where styrene was stored and lack of maintenance of the tanks below 20°C are factors cited in the report. Styrene causes itching of the skin and eyes, and irritation of the upper respiratory tract. The International Agency for Research on Cancer classifies it as a Group 2A (probable) carcinogen. It enters the human body predominantly [through respiration, but can also enter through the skin and eyes](#). The [chronic or long term effects](#) of exposure to styrene include damage to the central nervous system, hormonal disruption, and reproductive harm. People who are exposed to styrene may only become aware of its harmful effects several years later.

According to a local trade union leader in Visakhapatnam, the factory failed to comply with safety rules and regulations during the lockdown, and reopened the factory without environmental clearances from the authorities. According to the trade union leader, factory management engaged casual and temporary workers in critical operations where skilled and experienced staff were essential to maintain safety standards and respond to potential emergencies. The Indian government [has recognised](#) that the shift from a permanent and experienced workforce to cheaper, more flexible, but also less experienced contract workers—a trend in the [electronics industry in India](#)—creates problems for management of occupational health and safety risks at workplaces.

Following the gas leakage, people living around the plant have been displaced from their homes to prevent further exposures, and hundreds were treated in hospitals for the symptoms. In this extreme situation people cannot practice adequate social distancing and are therefore more vulnerable to Covid-19 as well. Pregnant women, the elderly, and children in particular risk not receiving adequate medical support, health, and nutrition.

Electronics Watch and Cividep support the calls of the local community, trade unions, and the international ANROEV Network (Asian Network for the Rights of Occupational and Environmental Victims) for justice for the victims and for a thorough investigation by the relevant authorities to discover and publish the causes of this tragedy. Remedy should include an immediate solution for all affected people who are displaced, sick or have lost family members, as well as long-term solutions for those who may develop diseases or disabilities later in life because of exposure to the styrene gas, as the [UN Special Rapporteur on hazardous substances and wastes has recommended](#). LG Polymers is responsible for any failure to comply with environmental and health and safety standards and should be held accountable. Preventive measures should be based on a comprehensive and independent investigation that takes into account the impact of employment conditions on occupational health and safety and emergency preparedness. The investigation, remediation, and accountability measures should be carried out with the utmost urgency and be fully transparent to support the healing process of the local communities.