

Is North Chennai another Bhopal?



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Introduction

In Bhopal, people were gassed to death in one night. In North Chennai, local residents are being exposed to poisonous gases on a daily basis – a slow-motion Bhopal. So is North Chennai another Bhopal? To answer that, one would need to see if the conditions that led to the 1984 Union Carbide disaster in Bhopal apply to North Chennai.

The Bhopal gas disaster happened because hazardous and untested technologies were deployed in a thickly populated residential area. A hazardous, quick spreading gas was stored in large quantities in the factory. Community and worker complaints about pollution and unsafe workplace conditions were routinely ignored. The worst affected people were also politically the weakest, from religious minority, historically oppressed and economically vulnerable communities. 85 percent of those affected were working class people preoccupied with keeping their paltry daily wages coming. The community was kept in the dark, and even actively misled about the hazardous chemicals and processes used in the Union Carbide factory. As a result, people were unable to respond appropriately when the disaster struck. The regulators and the Government openly colluded with the industry to the extent that community members and workers that dared to complain about pollution were seen as trouble-makers and anti-development. Because many of the residents were squatters, and were constantly under fear of eviction, they dared not complain against pollution. Even 26 years after the gas disaster, which has killed over 25,000 people and affected over 5 lakh people, children are being born deformed to parents exposed to toxic gases and continued exposure to contaminated soil and ground water around the abandoned factory.

Consider North Chennai, especially around Manali, Ennore, Tiruvottiyur, Ambattur etc. Highly hazardous units have been and continue to be located in close proximity to residential areas. Local complaints about gas leaks, pollution and routine occurrence of hazardous incidents have not made a difference in the attitude of regulators or state planners. In many instances, these are never even reported or recorded by the authorities. The potential for a major fire is immense given the large quantities of petroleum products stored in tank farms dotting the area. Calamitous events involving volatile and hazardous gases are a distinct likelihood because large quantities of chemicals like ammonia, chlorine, benzene and hydrogen fluoride are stored in various factories.

Environmental monitoring data released by Chennai-based Community Environmental Monitoring (CEM) in 2005 and 2007, showed the presence of highly toxic chemicals in the ambient air around the factories and residential areas. These too have been ignored by the industries and monitoring agencies. CEM reported presence of 14 highly toxic chemicals in the air samples: Hydrogen Sulphide, Carbon disulphide, ethanol, acetone, iso propyl alcohol, 2-butanone, n-hexane, benzene, toluene, ethyl benzene, m,p-xylenes, o-xylene, Bromomethane, Methyl Ethyl Ketone, Ethylbenzene, n-Nonane. All chemicals target the eyes, 11 chemicals target the skin, Central Nervous System and the respiratory system, 4 chemicals target the liver and kidneys, 3 chemicals target the blood, 2 chemicals target the Peripheral Nervous System, reproductive system and the gastrointestinal system and 1 chemical affects the Cardio Vascular System. One chemical – benzene -- is a known human and animal carcinogen, which also causes a rare childhood cancer called leukemia or blood cancer.

In 2005 Local Area Environment Committee (LAEC-Manali) constituted by Supreme Court appointed Monitoring Committee on Hazardous Wastes and Chemicals found large scale environmental violations by factories in Manali. LAEC reported that pollution from small scale industries had gone unchecked in the area and Tamil Nadu Pollution Control Board (TNPCB) did not even have a complete list of small industries operating in the area. The committee found illegal discharge of oil (waste or otherwise) from CPCL facility which had flown into the storm water channels, contaminated the soil and surrounding wetland vegetation. Discharge of untreated toxic effluents was a key problem identified by the committee. Test results of effluents from Futura Polymers' bio-sludge showed

presence of Cadmium, a toxic heavy metal known to cause kidney, lungs and liver damage in humans. Large piles of spent lime were found to be indiscriminately dumped all across the area. LAEC noted in their final report that community interactions had provided clear indication of ground water contamination and that situation has worsened since 1967. They also noted storage of large quantities of hazardous wastes like spent oil by MFL for very long periods of time, which is in violation of Hazardous Wastes (Storage and Handling) Rules 1989. Finally, the Committee had made various recommendations, none of which seems to have been implemented, including supply of clean drinking water to the residents as the groundwater of the area has been contaminated by illegal discharges from the factories.

These reports and monitoring data are by no means comprehensive. But they are an indicator that North Chennai is a slow-motion Bhopal, with poisonous gases tainting the everyday air of local residents and workers. They also raise issues of environmental justice where highly hazardous industries are deliberately located in poorer neighbourhoods, where people have less bargaining power.

While an accident like Bhopal, if it ever occurs in this area, will cause similar or may be far greater calamity, what remains a key concern is the 'slow poisoning' of the people of North Chennai due to the toxics emissions from these factories. Daily exposure to toxic chemicals even at low dosage will have long term impact on the health of the local residents which also includes the workers.

Bhopal 1984; North Chennai 20?? – Will history repeat itself?

S No.	Conditions	Bhopal	North Chennai
1.	Toxic facility	Untested toxic facility to manufacture pesticide was set up in Bhopal	Various chemical industries have old and badly maintained plants to manufacture petrochemicals and bulk chemicals. Factories Inspectorate permissions are seldom sought prior to construction of factories.
2.	Location of the plant	The plant was located in an area with dense population, with residential areas at a distance less than 50 mts from the unit	The plants are located next to each other sandwiching at least 10 villages. More than 1,00,000 people reside in the immediate vicinity of the units.
3.	Type of Community	Facility located in a working class neighbourhood with people from socially, economically and politically marginalised sections of society.	North Chennai residents are predominantly working class, and from socially, economically and politically weaker sections of society.
4	Insecure workers; Insecure residents	Workers fearful of job-loss; many residents were squatters without land-titles and hence apprehensive of eviction if they raised their voices	Most workers contract workers, and particularly vulnerable. Will be replaced at first sign of assertion. Many communities near the factory site are squatters who are fearful of eviction.
4.	No information about hazards	No information was shared with the community or workers about the products manufactured in the plant or the chemicals used. Communities knew little about disaster response. Hazards and	No information has been shared with the communities about the products manufactured or chemicals used in the North Chennai industries. The community has been given no information or training on what to do in

		dangers were underplayed to give a false sense of security.	the event of a disaster. Serious gas leaks and spills are routinely dismissed as mere odour nuisance. Fire service and hospital infrastructure uninformed and inadequate to deal even with minor incidents.
5.	Complaints ignored	Environmental pollution, cattle deaths, worker injuries and deaths due to workplace hazards were not taken seriously. No root-cause investigations were conducted. Routine accidents and hazardous incidents in the Union Carbide factory were ignored.	Several hazardous incidents and illegalities have been reported in the past but no serious action on the violators have been taken. On one incident, the TNPCB itself referred to a gas leak from CPCL as routine, displaying apathy towards environmental and human health.

Chemicals detected in air samples (in Manali) and their health impacts (CEM 2005-07):

S No	Chemical found	Odour	Health Effects
1.	Hydrogen Sulphide	A strong odour of rotten eggs	Irritation eyes, respiratory system; convulsions; conjunctivitis, eye pain, dizziness, headache, weakness, exhaustion, irritability, gastrointestinal disturbance
2.	Carbon Disulphide	A sweet ether-like odour	Dizziness, headache, poor sleep, weakness, exhaustion, anxiety, weight loss; gastritis; kidney, liver injury; eye, skin burns; dermatitis; reproductive effects
3.	Ethanol	A pungent, fruity odour	Irritation eyes, nose, throat; eye, skin burns; dermatitis; conjunctivitis; cough; central nervous system depression;; in animals: kidney, reproductive, teratogenic effects; [potential occupational carcinogen]
4.	Acetone	A fragrant, mint-like odour	Irritation eyes, nose, throat; headache, dizziness, central nervous system depression; dermatitis
5.	Isopropyl Alcohol	Odour of rubbing alcohol	Irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin
6.	2-Butanone	A moderately	Irritation eyes, skin, nose; headache; dizziness; vomiting;

	(Methyl Ethyl Ketone)	sharp, fragrant, mint- or acetone-like odour	dermatitis
7.	n-Hexane	A gasoline-like odour	Irritation eyes, nose; nausea, headache; muscle weakness; dermatitis; dizziness
8.	Benzene	An aromatic odour	Irritation eyes, skin, nose, dizziness; headache, nausea, exhaustion; bone marrow depression; [potential occupational carcinogen]
9.	Toluene	A sweet, pungent, benzene-like odour	Irritation eyes, nose; weakness, exhaustion, confusion, euphoria, dizziness, headache; discharge of tears; anxiety, muscle fatigue, insomnia; liver, kidney damage
10.	Ethylbenzene	An aromatic odour.	Irritation eyes, skin, mucous membrane; headache; coma
11.	m,p- Xylenes	An aromatic odour.	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; nausea, vomiting, abdominal pain; dermatitis
12.	o-Xylene	An aromatic odour.	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait, nausea, vomiting, abdominal pain
13.	Bromomethane	A chloroform-like odour at high concentrations	Irritation eyes, skin, respiratory system; Central Nervous System depression; liver, kidney disease, cardiac arrest, [Potential occupational carcinogen]
14.	n-Nonane	NA	NA

Status of consent to operate (under Water and Air Act) status of industries in Manali and Ennore (partial list):

Manali

Name of Industry	Consent Status
M/s. Manali Petrochemicals Ltd.	Consent expired in 30.9. 2009
M/s. Kothari Petro Chemicals Ltd.	Consent expired in 31.3. 2009
M/s. Inox Air Products Ltd.	Consent expired on 31.3.2010
M/s. SRF Polymers Limited	Consent expired in 31.3.2008
M/s. SRF Limited	Consent expired in 31.3. 2007
M/s. Balmer Lawrie & Co. Limited	Consent expired on 30.9.2009
M/s Chennai Petroleum Corporation Limited	Consent expired on 30.9.2009
M/s. Tamil Nadu Petro Products Limited	Consent expired on 30.3.2010
M/s TPL (Epi -chloro hydrin Plant)	Consent expired on 30.9.2009
M/s. Pure Industrial Gases P Ltd.	Consent expired on 31.3.2010
M/s. Goyal Metal Industries P Ltd.	Consent expired on 30.9.2009
M/s. Balmer Lawrie & Co., (Barrel Divn)	Consent expired on 31.3.2010
M/s.Sudhanthira Devi Dhall Mill Sathangadu, Manali	Consent expired on 30.9.2008
M/s. S.T. Shanmugam Snuff Co.	Consent expired on 30.9.2008
M/s. Pure Industrial Gases P Ltd	Consent expired on 31.3.2010
M/s. Goyal Metal Industries P Ltd	Consent expired on 30.9.2009
M/s.J.B.Steel Industries	Consent expired on 30.6.2009
M/s. Mirra & Mirra Industries	Consent expired on 31.3.2007
M/s.Sree Karumari Steel Industries	Consent expired on 31.3.2007
M/s. Dev Industries	Consent expired on 31.3.2006
M/s. MFPL Flourine Products	
M/s Futura Polymers Ltd.	
M/s Madras Fertilizers Ltd	

ENNORE:

Name of Industry	Consent Status
M/s. Ennore Pr lmited	
M/s. Ennore Foundaries Ltd. (Power Plant)	No info
M/S.Coromandel Fertilizers Ltd	Consent expired on 31.10.2009
Ennore Thermal Power Station	Consent expired on 31.3.2010