Hindustan Times/ Bhopal/ 02/08/2013

http://www.hindustantimes.com/India-news/Bhopal/CSE-propose-action-plan-to-clean-Union-Carbide-in-five-years/Article1-1101918.aspx

## **CSE** propose action plan to clean Union Carbide in five years

Chetan Chauhan, Hindustan Times Bhopal, August 01, 2013

As the Union Carbide factory's crumbling structure approaches 30 years, the remediation of the site still hangs in balance as the governments --- Centre and State --- await directions from the Supreme Court.

The Centre for Science and Environment on Thursday presented environmental remediation for Union Carbide site which can remove the hazardous chemicals from above and below the ground in the next five years.

"The government needs to discuss the action plan proposed by experts who have conducted studies on Bhopal gas tragedy. It is workable if there is a political will," said CSE's director general Chandra Bhushan. The experts who have prepared the action plan included scientists from government run institutions and civil society activists working with victims of Bhopal gas tragedy.

A visit to Union Carbide site that stinks with chemicals consuming hundreds of lives in the historic city of Bhopal and is source of ground water contamination making locals fall ill is a reason to take action.

The ground water in localities around the factory is contaminated with heavy metals said to be carcinogenic. The solar evaporation ponds developed on leased private land --- now given back to locals ---- has houses coming up. Now the open contaminated grass-lands are grazing grounds for goats of thousands of people living on the depilated boundary walls of the factory.

Abdul Jabbar, who had been fighting for Bhopal victims since 1984, describes the life of locals as difficult and expressed his deep sorrow that the government has not been able to remove the contaminants from the site.

Many blame activists like them for delay as they want Dow Chemicals, now owner of Union Carbide to pay for remediation. The issue is being debated in the Supreme Court as Department of Chemicals of the Central government has sought Rs. 310 crore for the same.

Although the official estimate of the waste at Union Carbide factory is 350 tonnes many believe that the waste is much more. "It is around 20,000 tonnes," Jabbar said.

Bhushan added that one has to consider the contaminated soil up to several meters below the ground is also a waste with hazardous chemicals which needed proper remediation.

What most experts at the half-day workshop agreed that it was time to start the remediation programme or ground water contamination would spread by a kilometer every year after monsoon. Nobody from Madhya Pradesh government attended the conference despite invitation.

Action plan based on 16 experts

- 1. Preventing annual surface water runoff -- within three months
- 2. excavation, recovery and characterisation of waste -- after monsoon three months
- 3. Incineration of the stored 350 tonnes of waste -- three to six months
- 4. Remediation of waste dumped in landfill -- two to three years
- 5. detoxification, dismantling and decommissioning of Union Carbide factory -- two years.

6. Conversion of Union Carbide into a memorial -- five to six years.

Bhopal waste disposal timeline 1969 --- Union Carbide factory starts

1973 --- first report of soil contamination

1982 --- a telex send from Union Carbide Bhopal about water contamination in nearby areas

1984 ---- days before the gas leak technical issues were raised but ignored.

1990 ---- An American lab confirmed contamination of ground water

2004 --- Chemicals ministry Rs. 100 crore for remediation

2005 --- A private firm collected 350 tonnes of waste and kept in a warehouse in Union Carbide factory

In eight years, the government considered various options including transportation to Germany but has failed to find an answer.