

Struggle against Corporate Environmental Crime and Complicity of Government Scientific Bodies in Bhopal

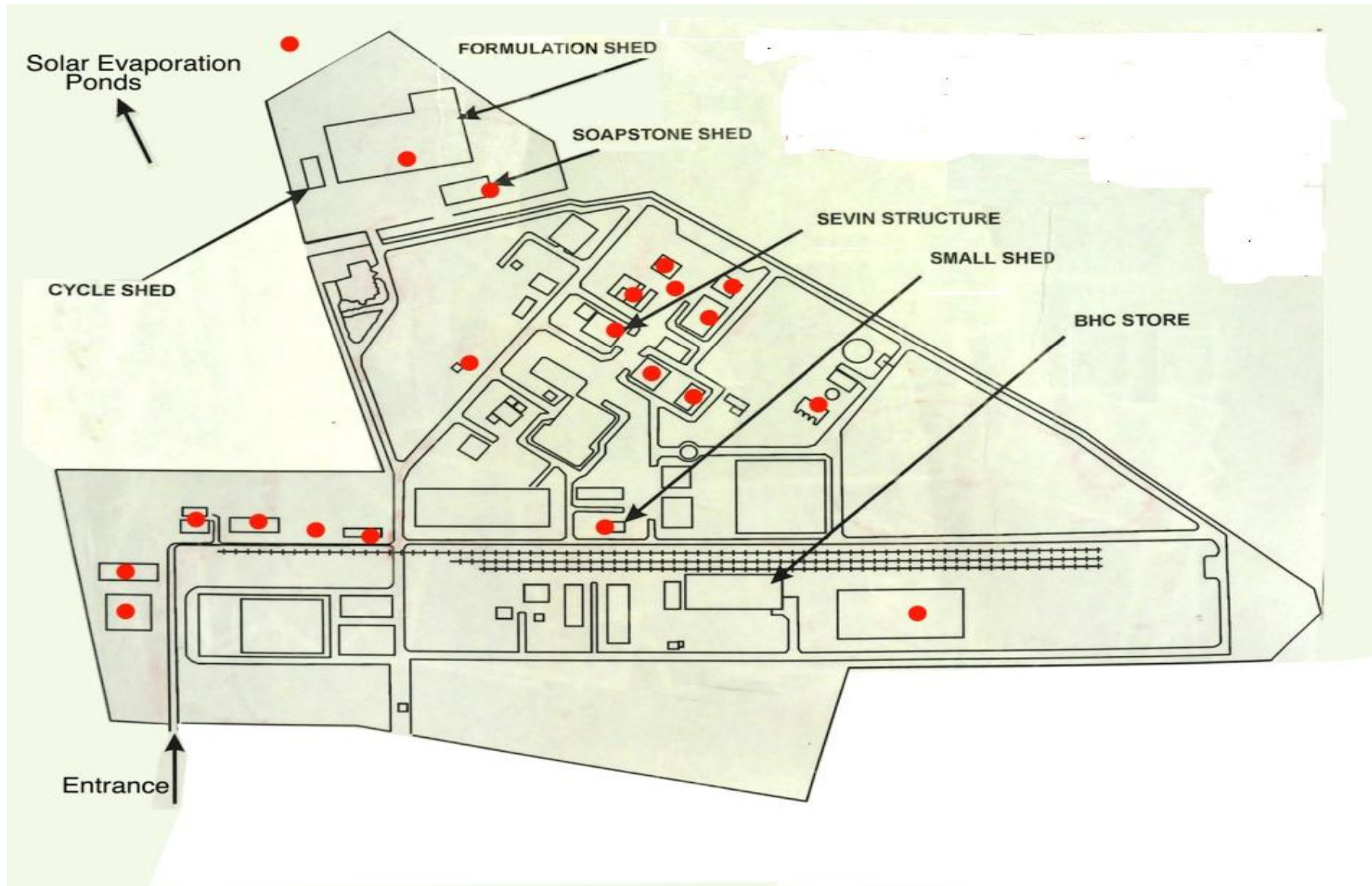
Satinath Sarangi

Sambhavna Trust, Bhopal

India habitat Centre, New Delhi, February 20, 2013



Dumping Sites inside Factory



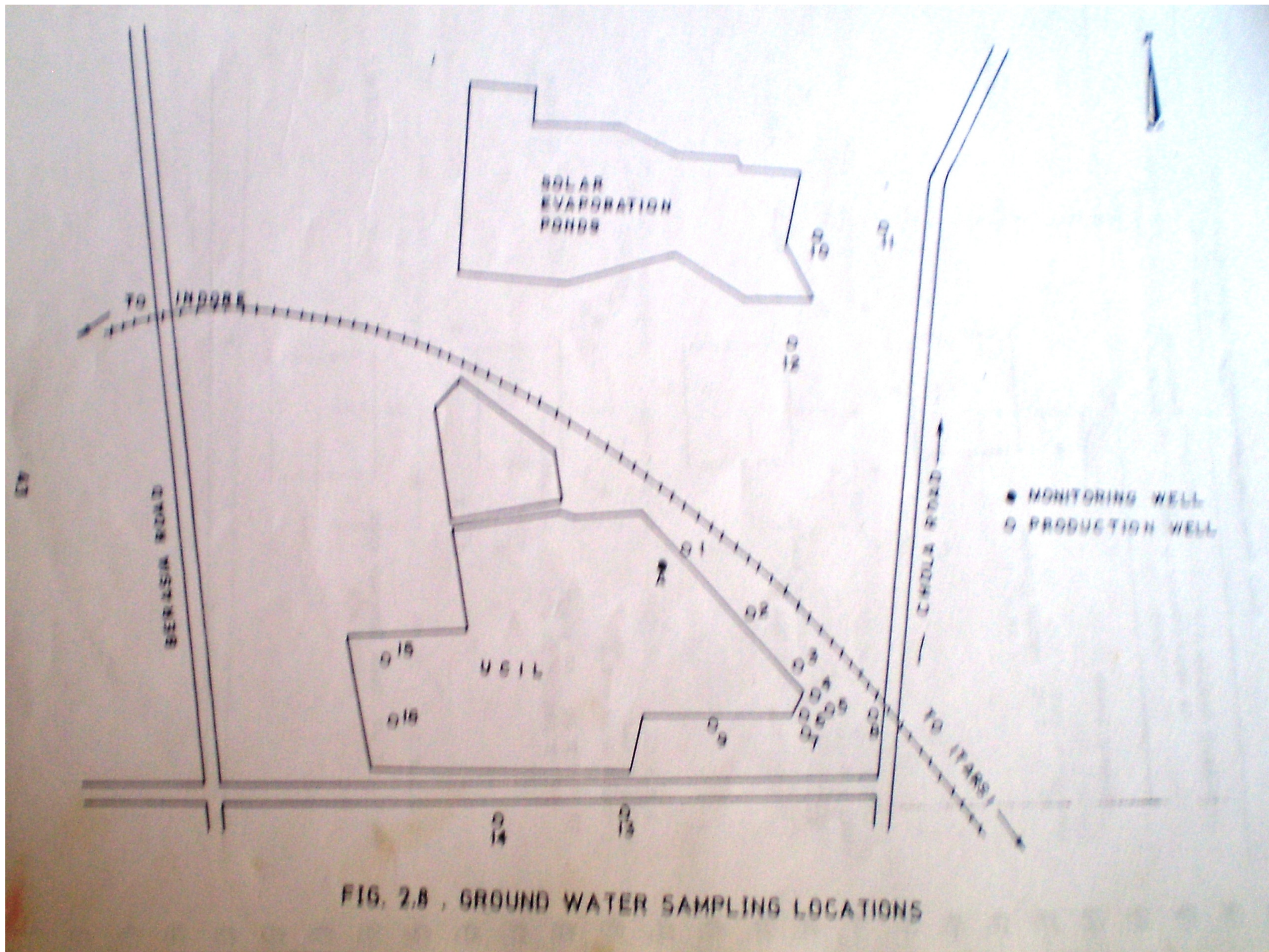


FIG. 2.8 , GROUND WATER SAMPLING LOCATIONS

Telexes about leaking ponds **Ignored**

25 March 1982

PHASE II EVAPORATION POND ALMOST EMPTIED. REPS OF KR DATEY AT :
AND INVESTIGATION OF THE LEAKAGE IN PROGRESS. UNFORTUNATELY
EMERGENCY POND HAS ALSO SHOWN SOME SIGNS OF LEAKAGE.

10 April 1982

APD:
MIC UNIT WORKING SATISFACTORILY AFTER THE PROLONGED ANNUAL SHUTDOWN
STOP CONTINUED LEAKAGE FROM EVAPORATION POND CAUSING GREAT CONCERN.
REPAIRS BEING PLANNED WITH ASSISTANCE FROM CONSULTANTS.

PRESENCE OF TOXIC INGREDIENTS IN SOIL/WATER SAMPLES INSIDE
PLANT PREMISES

Majority of the liquid samples contained naphthol and/or Sevin in quantities far more than permitted by ISI for onland disposal. All samples caused 100% mortality to fish in toxicity assessment studies and were to be diluted several fold to render them suitable for survival of fish.

**They already knew from
testing that it was deadly**

100% mortality



Report of CEL, Boston, April 1990

	<u>Waste Pond</u>	<u>Soil</u>	<u>Drinking Water</u>
Benzene, oxybis- *	7,890.	nd (less than 5 ppb)	nd
Dichlorobenzenes	87,500	82.	722.
PAHs	2,340.	nd	nd
Phthalates	9,940.	100	nd
Trichlorobenzenes	9,410.	17	24.
Trianethyl Triazintrione	24,470.	nd	nd
I-Naphthalenol	59, 090.	nd	nd

Letter from Union Carbide to Minister, 1990



UNION CARBIDE INDIA LIMITED
15, MATHEW ROAD, BOMBAY-400 004
TEL.: 225 29 50 CABLE: UNICARBIDE, BOMBAY TELEX: 011-75334

SUBIMAL BOSE
DIRECTOR


May 16, 1990

Hon'ble Shri Babulal Gaur
Minister for Gas Relief, Rehabilitation
Law and Local Self Government
Government of Madhya Pradesh
Vallabh Bhavan
BHOPAL

We strongly feel that the press reports circulated in the newspapers, are mischievous and meant to cause panic in the minds of the citizens of Bhopal. We feel this situation requires immediate clarification by the Government of Madhya Pradesh in order to remove unnecessary apprehension in the minds of the public and also to avoid any unnecessary agitation by interested parties.

With kind regards,

Yours sincerely,


SUBIMAL BOSE


NEERI, April 1990

* The overall conclusion of the study is that no contamination of soils and ground water was observed due to the impoundment of wastewater in solar evaporation ponds. The pond contents are to be removed and contained in a secure landfill prior to establishment of an industry in the area occupied by SEP.

NEERI , April 1990

HPLC analysis using acetonitrile and water as mobile phase showed the presence of four peaks each in pond waters I and II (Fig. 4.2). However, none of these peaks matched with that of either alpha-naphthol or sevin (Fig. 4.3). This confirms that pond water did not contain alpha-naphthol and sevin.

State Research Laboratory, 1991, 1996


Signature
CHEMIST :-

Remark :- water is chemically as well as bacteriologically
polluted. unfit for drinking.

~~Microbiologist~~
R. K. Singh
Chief Chemist

ON INDIAN GOVT. SERVICE State Research Laboratory,
Shyam Prasad, BHOPAL

No. / /SRL/PHED/DPL

To,

NEERI, 1992

The present study and also earlier studies carried out in 1989-90 did not show contamination of groundwater and soil near SEP. Remediation measures are not therefore suggested for ground water and soil near SEP. However, due to presence of high concentration of inorganics in pond contents, they require remediation.

NEERI, 1995

The absence of semivolatiles and volatile organics in ground water indicates that the contamination has not spread outside the plant premises

NEERI, 1997

is highly impermeable and would travel approximately at the rate of 36 cm/year at the permeability rate of 1×10^{-5} cm/sec. i.e. it would take 23 years for the contaminants to reach the ground water table provided the leachate does not find a channel to migrate at a faster rate. This could be reason for the water ^{if} in not getting contaminated

Greenpeace, 1999

5. In total, the survey conducted by Greenpeace International has demonstrated substantial and, in some locations, severe contamination of land and drinking water supplies with heavy metals and persistent organic contaminants both within and surrounding the former UCIL pesticide formulation plant. There is an urgent need for a more detailed and extensive survey if the full extent of ongoing contamination from the plant is to be determined.



BIRTH DEFECTS AMONG CHILDREN IN CONTAMINATED COMMUNITIES



Unusually large number of children in contaminated communities are born with malformations such as

Cleft Lip



Missing Palate

Mental Retardation

Stunted Growth

Brain Damage

& Others



Occupation of Directorate, 2004



Demonstration at Minister's Residence, 2005



Bhopal – New Delhi Padyatra, 2006



Protest Demonstration, 2007



Bhopal – New Delhi Padyatra, 2008



NEERI, 2009

..... I concur with the decision that the Union Carbide Factory will be made open for general public for a period of 15 days in connection with 25th Anniversary of Bhopal Gas Tragedy. The reason for concurring with the above mentioned idea lies in the fact that I, along with several government officials, have visited the site umpteen number of times without experiencing any health problem. The experts from the Supreme Court Monitoring Committee, CPCP officials, officials from Ministry of Petroleum and Natural Gas and officials from MPPCB who were with me on different occasions did not experience any health problem as I still continue to interact with them even today.

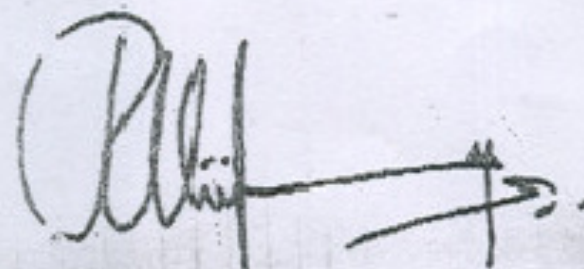
Sincerely yours,



(T. Chakrabarti)

DRDE, Nov. 2009

2. In other words, for a 70 kg man, there will not be any death even if he takes 200 gm by oral route. For Sevin tar, there will not be any death even if he takes 100 gm by oral route. This toxicity rate is lesser than ethyl alcohol, table salt (sodium chloride) and many of the commonly used drugs.
3. As per your plan, that is going to be followed on 03.12.09, there will not be any untoward, adverse or toxic effect to the public.



(Dr. R. Vijayaraghavan)
Director

Invitation to a Feast

*You are cordially invited to join in a
Benign Buffet*

on Saturday, 28 November 2009 at 12.00 pm on Union Carbide Road

*Rare delicacies prepared by Chef Dr. R. Vijayraghavan of DRDE, Gwalior
and Sous-Chef Tapan Chakravarty of NEERI, Nagpur with extracts from
Union Carbide's Factory served to you as:*

Semi-Processed Pesticide on Watercress

Naphthol Tar Fondue

Reactor Residue Quiche

Sevin Tar Soufflé

Lime Sludge Mousse

All served with a complimentary B'eau Pal Water Cocktail

*Bhopal Gas Peedit Mahila Stationery Karmachari Sangh,
Bhopal Gas Peedit Mahila Purush Sangharsh Morcha,
or Bhopal Group for Information and Action*

Your appetite will contribute to a cleaner Bhopal



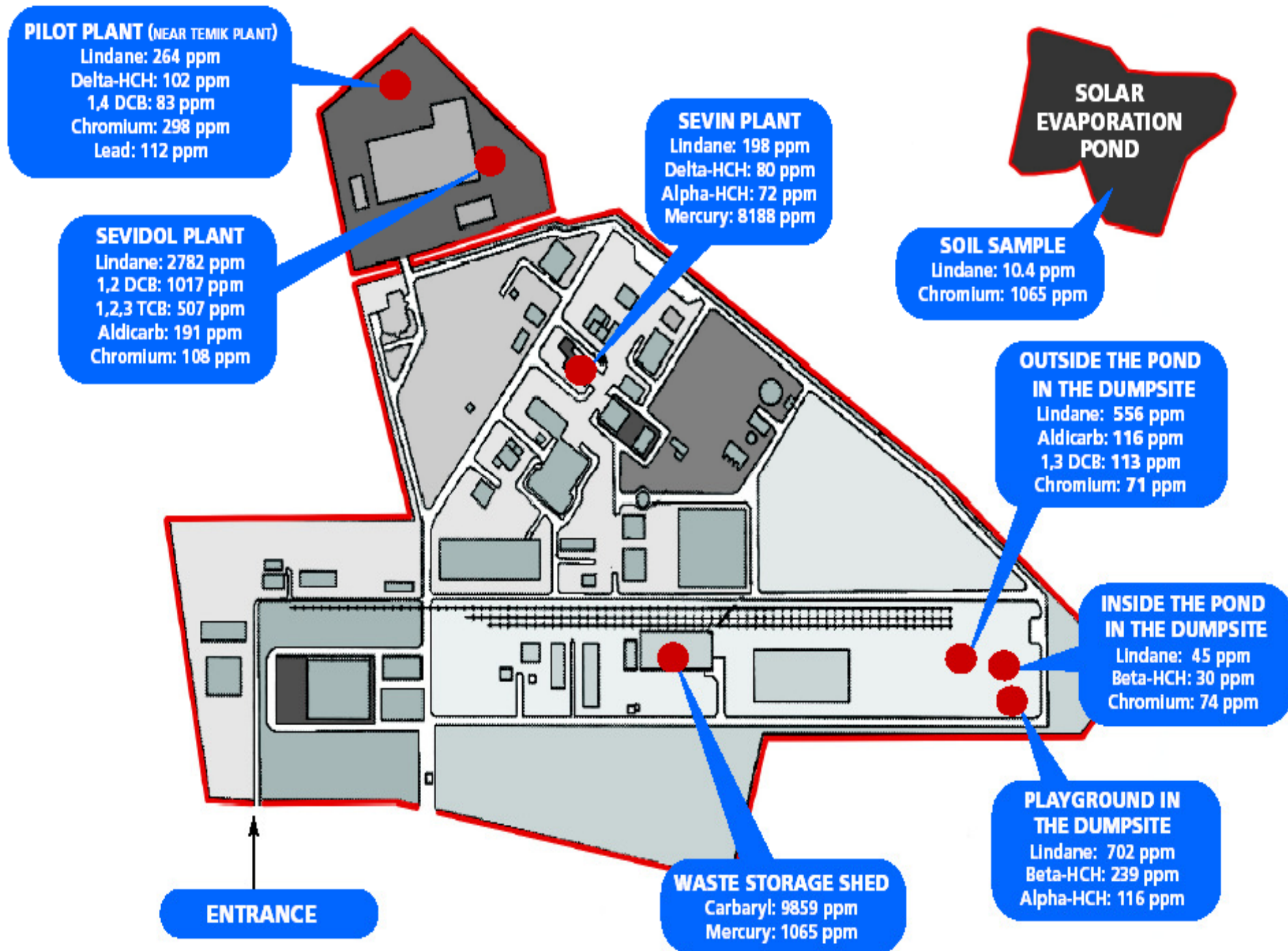
BHOPAL'S TOXIC LEGACY

Centre for Science and Environment's Pollution Monitoring Lab tested water and soil samples in and around the Union Carbide India Limited factory and found the site highly contaminated. The site is poisoning the groundwater of the surrounding areas.



CENTRE OF SCIENCE AND ENVIRONMENT

Note: BIS Standard for total pesticides (IS:14543): 0.0005mg/L



CSE Press Statement Dec 1, 2009

Continuing nightmare in Bhopal: CSE laboratory tests soil, water samples from Union Carbide

Finds high contamination of pesticides and other toxins.

...The concentration of pesticides was 1.1 to 38.6 times higher than the Indian standard. The water sample from a hand-pump near the Chaurasia Samaj Mandir in Shiv Nagar – more than 3 km from the factory – was the most contaminated. It had the highest concentration of Carbaryl (0.011 ppm, 110 times the standard); Lindane (0.004 ppm, 40 times the standard); and mercury (0.024 ppm, 24 times the standard).....

.... “The profile of chemicals found within the UCIL factory and in the waste disposal site of UCIL matches the chemicals found in the groundwater sample in the colonies outside. There is no other source of these chlorinated benzene compounds and pesticides than UCIL.”

...