

IN THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, AT NEW
DELHI

Original Application No. 732 of 2023

IN THE MATTER OF:

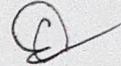
SUOMOTO NEWS ITEM APPEARED IN THE HINDU DATED 03.12.2023 TITLED "BATTLING WATER
WOES IN LAND OF TRAGEDY"

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Through

CGWA



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Place: New Delhi

pesticide analysis, encompassing pesticides like dichlorobenzene, trichlorobenzene, sevin, DDT, BHC, Aldrin, etc. The results indicated either the absence of pesticides in the water samples or concentrations below the detection limit.

Furthermore, the results suggested that the study area had saline ground waters due to the inherent geogenic high degree of mineral dissolution from parental material.

Central Ground Water Board (CGWB), NCR, Bhopal, has recently initiated another groundwater quality study in the vicinity of Union Carbide India Limited (UCIL), Bhopal. CGWB had collected 36 nos of groundwater samples out of which 15 samples are from shallow aquifer (4dug wells, 11 hand pumps) and 21 are from deeper aquifer (bore wells). The samples will be analysed for 14 basic parameters viz. pH, Electrical Conductivity (EC), Carbonate and Bicarbonate (CO₃ & HCO₃), TDS, Chloride (Cl), Sulphate (SO₄), Nitrate (NO₃), Fluoride (F), Total Hardness (TH), Calcium (Ca), Magnesium (Mg), Sodium (Na) and Potassium (K) and 18 heavy metals/trace element parameters viz. Aluminium (Al), Arsenic (As), Barium (Ba), Boron (B), Cadmium (Cd), Chromium (Cr), Copper (Cu), Iron (Fe), Lead (Pb), Manganese (Mn), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Silver (Ag), Strontium (Sr), Uranium (U) and Zinc (Zn). Upon completion of the study, the findings will be presented in a report to the relevant authorities at the earliest.

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 P. K. Mishra / J. A. K. Biswal
 Director / Regional Director
 Central Ground Water Board / North Central Region, Bhopal
 Ministry of Water Resources, Govt. of India
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Table 1: Showing Ground Water Quality Results of Area Surrounding Union Carbide Factory, Bhopal.

S. No.	District	Location	Source	Date of Collection	pH	EC	CO ₃	HCO ₃	Alkalinity	Cl	SO ₄	NO ₃	F	TH	Ca	Mg	Na	K	Fe	Mn	Cu			
						µS/cm at 25°C	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
					BIS Limit →	Desirable → Permissible →	750 3000		200 600	250 1000	200 400	45 No Relaxation	1.0 1.5	200 600	75 200	30 100	200*WHO 10*WHO	10*WHO	0.3 No Relaxation	0.1 0.3	0.05 1.5			
1	Bhopal	Chandbad	HP	7/14/2011	6.96	2990	0	348	285.2	422	250	441	0.17	940	332	27	228	48	0.29	0.02	0.615			
2	Bhopal	Rail Coach Factory	TW	7/14/2011	7.05	1280	0	403	330.3	163	35	52	0.34	405	144	11	107	1	0	0.00	0.252			
3	Bhopal	Chhola Dasherai Maidan	TW	7/14/2011	6.8	1980	0	427	349.9	344	75	95	0.28	715	236	30	125	2.5	0	0.00	0.293			
4	Bhopal	Shankar Nagar	TW	7/14/2011	6.94	1242	0	317	259.8	177	38	85	0.25	500	156	27	54	1.5	0.067	0.01	0.28			
5	Bhopal	Sundar Nagar	HP	7/14/2011	7.06	2785	0	238	195.0	730	70	117	0.82	735	224	43	296	10.1	1.225	0.23	0.143			
6	Bhopal	Chhola Naka	TW	7/14/2011	6.76	2215	0	512	419.6	330	124	113	0.38	895	230	78	95	3.2	0.11	0.00	0.742			
7	Bhopal	J.P. Nagar	TW	7/14/2011	7.06	1030	0	329	269.6	96	45	77	0.6	405	94	41	50	0.7	0.026	0.00	0.055			
8	Bhopal	DIG anglow	DW	7/14/2011	7.31	835	0	262	214.7	67	45	74	0.54	305	86	22	45	11.1	0.74	0.00	0.045			
9	Bhopal	Ashina Colony	HP	7/14/2011	7.16	1315	0	354	290.1	216	11	64	0.66	460	114	43	90	2	0.61	0.00	0.246			
10	Bhopal	Geetanjali College	HP	7/14/2011	7.04	1060	0	415	340.1	78	32	54	0.52	380	104	29	67	2.3	2.68	0.02	1.975			
11	Bhopal	Phoota Makabara	HP	7/14/2011	7	695	0	214	175.4	60	58	33	0.43	285	72	26	25	6.8	0.134	0.00	0.368			
12	Bhopal	Nadra Bus Stand	HP	7/14/2011	7.24	465	0	201	164.7	25	20	15	0.26	195	60	11	12.5	8.9	0.11	0.00	0.09			

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Table-2: Ranges of Chemical Parameters of Analysis Data in Bhopal City (Year wise) (Source: MP Pollution Control Board, Bhopal).

Year of collection	No. of wells	pH	Electrical conductivity	Alkalinity	Total Hardness	Chloride	Iron	Manganese	Copper	Cadmium	Nickel	Chromium
			($\mu\text{S/cm}$ at 25 °C)	mg/l								
1996	8	6.96-7.73	797-1601	280-500	180-510	89-424	0.04-0.11	0.33-0.75	BDL	-	BDL	BDL
			0-750 :0	0-200 :0	0-300 :3	0-250 :7						
			751-1500 :7	>200 :8	301-510 :5	>250 :1						
			>1500 :1									
1998	20	6.62-7.96	263-2400	70-530	134-712	17-415	0.0-0.166	0.0-0.162	BDL	-	BDL	BDL
			0-750:8	0-200:4	0-300 :15	0-250:17						
			751-1500:9	>200:16	301-600 :3	>250:3						
			>1500:3		>600:2							
2009	11	7.50-8.31	820-2100	120-370	132-565	180-610	0.0-0.37	0.0-0.03	0.01-0.024	BDL	BDL	BDL
			0-750 :0	0-200 :2	0-300 :7	0-250 :4						
			751-1500 :6	>200 :9	>300 :4	>250 :7						
			>1500 :5									
2010 (Data available for trace element only)	5						0.11-1.81	0-0.32	0-0.205	BDL	BDL	BDL

BDL: Below Detectable Limit

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 MP Pollution Control Board
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 2010