

**BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA**

Original Application No.34/2023/EZ

News item Published in The Times of India Newspaper, Calcutta edition dated 23.03.2023 titled 'Kolkata Water Table Dips 2m in 5 years, Experts flag rise in arsenic, salinity'

Versus

Central Ground Water Authority &Ors.

...Respondents

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Filed by:

Sudip Kumar Dutta
Advocate for the
State of W.B.



22 SEP 2023

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AFFIDAVIT ON BEHALF OF THE RESPONDENT NO.7 PHED IN

COMPLIANCE OF ORDER DATED 4TH SEPTEMBER, 2023

I, Pratip Rudra, son of Late Chinmoy Kumar Rudra, aged about 52 years, by faith – Hindu, by occupation – service, residing at AI/153/16, Street No.18, Block-AI, Action Area-I, New Town, Kolkata – 700156, do hereby solemnly affirm and say as follows:

1. I am the Superintending Engineer, South 24-Parganas Water Supply Circle, Public Health Engineering Directorate and as such a principal officer thereof. I am and have made myself well acquainted with the facts and circumstances of the instant case and am duly authorized by the PHE



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Department to make and affirm the instant affidavit and file a report in compliance with the orders passed by this Hon'ble Tribunal.

2. The instant affidavit is being filed apropos the directions contained in the order 04th September, 2023 whereby this Hon'ble Tribunal has been pleased to direct the respondent no. 7 being the PHE Directorate to file affidavit stating clearly what action has been taken for providing potable water in those areas which are showing higher concentration of arsenic beyond the permissible limit and other remedial measures.

3. I say that in South 24 Parganas District, the major water supply scheme "Surface water based water supply scheme for Kulpi and Adjoining Blocks" is being implemented for supplying purified drinking water in **10** blocks viz. Kulpi, Diamond Harbor-I, Diamond Harbor-II, Magrahat-I, Mathurapur-I, Mathurapur-II, Mandirbazar, Jaynagar-II, Kultali, Falta. The scheme utilizes the water from Hooghly River and is designed to provide drinking water to a design population of **32.89** lakhs (2036) and consists of a Water Treatment Plant of designed capacity of **52 million gallons per day**. The source of this mega project being surface water, is free from arsenic contamination.

4. I say that in South 24 Parganas District, routine water test is being done on a regular basis in our NABL (National Accreditation Board for Testing and Calibration Laboratories) accredited/ recognized laboratories.

This district has 18 numbers of laboratories out of which 17 numbers got



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NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation/recognition except 1 number which is NGO (Non-Governmental Organization) managed laboratory. Each spot source is tested once in a year and FHTC (Functional Household Tap Connection) is tested twice in a year. A list of such laboratories and block wise jurisdiction has already been shared with Hon'ble Bench. The distribution pattern of Arsenic contamination has so far being observed only in shallower depths in a few blocks (Bishnupur, Baruipur, Sonarpur, Bhangar I, Joynagar I and Magrahat II) though it is yet not significantly established beyond permissible limit as per Indian Standards. However, provision of AIRP (Arsenic and Iron Removal Plant) have been kept in the DPR (Detailed Project Report) for new piped Water Supply Scheme in these area for installation, if required in future. All other blocks in the district are not found to be contaminated with Arsenic in ground water as on date. All schemes which are being implemented under Jal Jeevan Mission are based tube well of higher depth which are devoid of arsenic contamination. In addition to the provision of AIRP, the water samples from the outlet points i.e. household connections are being tested regularly. A total of 17,020 such tests have been conducted by 163 active facilitators in this financial year(2023-24) and no adverse results related to arsenic contamination has been reported so far. Overall 41.36% of Villages have been tested using both Laboratory and Field Testing Kits (FTK). A total no. of **3506** (Three Thousand Five Hundred and Six) ASHA WORKERS have been trained till date for testing water samples using



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FTK (FIELD TESTING KITS) and total no of FTK (FIELD TESTING KITS) distributed for the purpose is 3583.

5. I further say that the water extracted for supply from higher depths through big-dia tube wells so far is absolutely arsenic contamination free. Water test reports of such big diameter Tube wells drawing water from higher depths have already been shared with Hon'ble Bench with previous affidavit. However, considering the rising trend and distressing nature of contamination of this detrimental metalloid in the near future, 'Arsenic & Iron Removal Plants' (AIRP) (total no of 232 removal plants) for ground water schemes have been considered to be implemented (if required) in Detailed Project Reports (DPR).

6. I say and submit that the State Government has taken following action regarding supply of potable water to the people exposed to arsenic contamination in ground water:-

a. A total of 883 numbers of Schemes have been sanctioned in the district South 24-Parganas having combined value of 6114.41 Crores. 1144 Nos of Big Dia. deep Tubewells are to be sunk under these sanctioned schemes. Along with other infrastructures planned for supply of drinking water, provision of Arsenic and Iron removal plants has also been kept in the Detail project reports of the Schemes. The Block-wise number of such AIRPs (Arsenic & Iron Removal Plants)

considered to be commissioned (if required) are as follows:



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Selected Blocks of South 24 Parganas	
Blocks	No. of AIRPs
Bishnupur I	35
Bhangar I	29
Sonarpur	33
Baruipur	70
Jaynagar I	33
Mograhat II	32

b. There are two proven field scale technologies on AIRP (Arsenic and Iron Removal Plant) i.e. 'Shujapur Shadhipur "& "Gobordanga" Models Forensic & Iron removal. The basic removal process of the plant is followed by Oxidation, Filtration, Coagulation and finally Adsorption method. The consecutive treatment units/chambers are designed and named as Baffled Flocculator, Plain Sedimentation Tank, Partial gravity system with pressure type filter, and Activated Alumina Chamber for final adsorption. The capacity of the removal plants are designed on the basis of population to be covered by individual water supply schemes (from 20 to 50 Cum/hr).

7. I further say that these Arsenic & Iron Removal Plants (AIRP) are designed to be used with supreme and well-known media 'Activated Alumina' for 'Total Arsenic' removal. The raw water is generally oxidized by the suitable chemical agent for effectively removing 'Total Arsenic' where the hydraulic operation of the system is partial gravity flow (without any pump)



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followed by a pressure filter device with required quantity of media to remove arsenic. A backwash system has been designed to prevent the media from clogging and to clean the system. Both raw and treated water would be regularly tested to ensure the Arsenic removal and supplied as safe water among the population.

8. I further say that PHE Department is entrusted with the mandate to provide potable water through piped water supply in the rural part of the State. However, Kolkata Metropolitan City is controlled by the Kolkata Municipal Corporation. At present different piped water supply schemes are being implemented across the state to provide tap connection to every household which is the mandate of Jal Jeevan Mission [JJM]. In South 24 Parganas district also several piped water supply projects have been taken up under Jal Jeevan Mission(JJM)for uncovered areas where no piped water supply exists, and also for augmentation of water supply of already covered areas.

9. I further say that for new Piped water supply schemes based on ground water sources which are being implemented under Jal Jeevan Mission (JJM), **utmost care is being taken to tap the deepest layer which is generally devoid of arsenic** contamination beyond permissible limits.

10. I further say that as per JJM guideline for source recharging viz. dedicated borewell recharge structures, rain water recharge, rejuvenation of



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existing water bodies etc. need to be adopted using water shed/spring shed principles, in convergence with other schemes such as MGNREGS (MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME), Finance Commission Grants, State Schemes, MPLAD (Members of Parliament Local Area Development Scheme) etc. Such work will be taken up by local Gram Panchayet under Department of Panchayet and Rural Development, funds from sources other than JJM (JAL JEEVAN MISSION) to be dovetailed for the purpose.

11. I humbly submit that PHE Department/Directorate has been taking all-out efforts to provide safe and arsenic-free water to populace. In so far as the article published in the Times of India regarding depletion of ground water level is concerned, the concerned Department is looking after these aspects.

12. The statements made in paragraphs 1 to 11 are true to my knowledge based on information derived from records and the rest are my respectful submissions before this Hon'ble Tribunal.



Deponent is known to me

Prepared in my office

Identified by me



Advocate

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7/22/9/23
Serial No.....

Verification

BEFORE THE NOTARY
ALIPORE JUDGES COURT
KOLKATA-700 027

I, PratipRudra, Superintending Engineer, South 24-Parganas Water Supply Circle, Public Health Engineering Directorate, Govt. of west Bengal do hereby solemnly affirm and verify that the contents of the statements made in the above paragraphs of the affidavit are true and correct to the best of my knowledge and belief. No part of the same is false and nothing material has been concealed therefrom.



Verified at Kolkata, on this the _____ day of September, 2023.

[Signature]
Deponent

Identified by me

Debasish Chowdhury
Advocate
Debasish Chowdhury
Advocate
Alipore Judges Court, Kol-27
WB/929/1983



Solemnly declared and affirmed
Alipore Judges Court, Kol-27 on
Identification.....
Under Notaries Act

[Signature]

S. P. SINGH
Notary Govt. of India
2024/2001



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