

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 985/2019

WITH

Original Application No. 986/2019

(With report dated 30.10.2019)

In Re : Water Pollution by Tanneries at Jajmau, Kanpur,
Uttar Pradesh

WITH

In Re : Water Pollution at Rania, Kanpur Dehat & Rakhi
Mandi, Kanpur Nagar, Uttar Pradesh

Date of reserve of order: 13.11.2019

Date of uploading of order: 15.11.2019

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER

ORDER

1. This matter involves two issues. First issue relates to scientific disposal of Chromium dumps at Rania, Kanpur Dehat and Rakhi Mandi, Kanpur Nagar which have been in existence since 1976 and have *inter-alia* resulted in contamination of ground water, depriving the inhabitants of access to drinking water. Second issue relates to legality of order dated 08.08.2019 passed by the Principal Secretary, Urban Development, Uttar Pradesh allowing Jal Nigam, Kanpur permitting discharge of untreated sewage containing toxic Chromium directly into the river Ganga. Further issue is water pollution by tanneries discharging untreated industrial effluents containing toxic

Chromium into the irrigation canal through inadequately functioning CETP at Jajmau.

2. The matter was considered on 27.09.2019 on receiving reports from Justice Arun Tandon, former Judge, Allahabad High Court who was appointed to head a Committee to oversee control of pollution in River Ganga vide order dated 06.08.2018 in O.A No. 200/2014, *M.C Mehta v. Union of India*. The said matter was dealt with by this Tribunal on transfer of W.P. (Civil) No. 3727/1985 by the Hon'ble Supreme Court. The Tribunal passed orders dated 10.12.2015 and 13.07.2017 for different segments of River Ganga. Execution of the said orders is still being dealt with.

3. On 22.08.2019, this Tribunal gave *inter-alia* following directions:

*"16. As already observed by this Tribunal including in the order dated 14.05.2019 that River Ganga being National River with distinct significance for the country, **even a drop of pollution therein is a matter of concern. All the authorities have to be stringent and depict zero tolerance to the pollution of River Ganga. Wherever STPs are not operating, immediate bioremediation and/or phytoremediation may be undertaken if feasible.** To avoid procedural delay of tender processes, etc. specifications and norms for undertaking such activities may be specified in consultation with the CPCB as was earlier directed in our order dated 29.11.2018. Performance guarantees may be required to be furnished for ensuring timely performance. It needs to be ensured that setting up of STPs and sewerage network to be completed and carried out so as to avoid any idle capacities being created. Performance guarantees may be taken for preventing such defaults.*

17. Wherever the work has not commenced, it is necessary that no untreated sewage is discharged into the River Ganga. Bioremediation and/or phytoremediation or any other remediation measures may start as an interim measure positively from 01.11.2019, failing which the State may be liable to pay compensation of Rs. 5 Lakhs per month per drain to be deposited with the CPCB. This however, is not to be taken as an excuse to delay the installation of STPs. For delay of the work, the Chief Secretary must identify the officers responsible and assign specific responsibilities. Wherever there are violations, adverse

entries in the ACRs must be made in respect of such identified officers. For delay in setting up of STPs and sewerage network beyond prescribed timelines, State may be liable to pay Rs. 10 Lakhs per month per STP and its network. It will be open to the State to recover the said amount from the erring officers/contractors.

18. With regard to works under construction, after 01.07.2020, direction for payment of environmental compensation of Rs. 10 lakhs per month to CPCB for discharging untreated sewage in any drain connected to river Ganga or its tributaries and Rs. 10 lakhs per month to CPCB per incomplete STP and its sewerage network will apply. Further with regard to the sectors where STP and sewerage network works have not yet started, the State has to pay an Environmental Compensation of Rs. 10 lakhs per month after 31.12.2020. The NMCG will also be equally liable for its failure to the extent of 50% of the amount to be paid. Till such compliance, bioremediation or any other appropriate interim measure may start from 01.11.2019.

23. It was stated that though the tanneries were closed for violating the norms of discharge, the dues have not been collected from the members of the CETPs and the industries are clandestinely operating as shown from the data of water samples which contained high Chromium.

24. Chromium dump has been stored since 1976 which is required to be shifted to TSDF. The State of Uttar Pradesh may undertake health survey of the area and ensure shifting of the Chromium dumps within three months failing which it would be liable to pay environmental compensation of Rs. 10 lakhs per month to CPCB besides furnishing performance guarantee of Rs. 1 Crore to CPCB.

25. Let the remedial measures be taken by the SPCB for effective monitoring by installing CCTV cameras or undertaking surveillance in any other manner with the help of local police.”

4. Report filed by Justice Arun Tandon on the issue of Chromium dumps and consequent water pollution was that at the time of visit to the site, the Committee having representatives from NMCG, CPCB, UPPCB and UP Jal Nigam noticed that the water from hand pumps/borewells was coloured and unfit for drinking. Photographs of the same were filed. A sample of the water was taken. It was also stated that there was no source of potable water and the residents

were required to purchase drinking water. Consumption of water was leading to diseases to the inhabitants and the animals. The Committee suggested following measures:

- “(a) All hand pumps along with tubewells/borewells installed in the area be sealed and there should be complete prohibition on extraction of underground water for drinking purposes both at village Khanchandpur, Kanpur Dehat and Rakhi Mandi, Kanpur Dehat.*
- (b) State Government through its Chief Secretary must be directed to ensure supply of drinking water through tankers on day to day basis to the residents of the village Khanchandpur and also to surrounding areas till measures as below are not taken.*
- (c) Drinking water Sintex tanks be installed in appropriate number at appropriate places in village Khanchandpur for providing potable water within a period of 15 days for the use of the residents of the area. These tanks must be connected to a supply pipe line from a source of potable water within another 7 days and till then the tanks be filled everyday with drinking water through tankers.*
- (d) The materials which had been purchased for the purpose of Maha Kumbh Mela at Allahabad can be safely used for the above.*
- (e) Under the Addendum of DPR has to be made available for the purpose transshipment of the dump of the chromium by the State Government.”*

5. The Tribunal observed that remedial measures suggested by the Committee were required to be undertaken. Accordingly, the Tribunal directed the Chief Secretary, Uttar Pradesh to forthwith ensure steps for supply of drinking water to the residents in the affected area, apart from taking other remedial measures in the light of report of Justice Tandon in respect of Rania, Kanpur Dehat and Rakhi Mandi, Kanpur Nagar, around the area of Chromium dumps and as per earlier orders of this Tribunal.

6. Second report related to water pollution by the tanneries by discharging untreated industrial effluents containing toxic Chromium into the irrigation canal through inadequately functioning CETP at Jajmau, Kanpur and the permission granted by the

Principal Secretary, Urban Development, UP to Jal Nigam, Kanpur to discharge sewage containing toxic Chromium directly into the river Ganga. The Tribunal observed that such action was punishable under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 and such officer who permitted violation of law was required to be made accountable. The report also mentioned that while on 17.07.2019, information was given that STPs and CETP at Jajmau and Kanpur were not functional, on 02.09.2019, it was stated that the same were functional. The report also refers to the minutes of meeting held on 02.09.2019 in the conference room of the NMCG under the Chairmanship of Justice Arun Tandon as follows:

“Non-compliance to Faecal Coliform standards is unacceptable and Committee advised NMCG and UP Jal Nigam to take immediate steps to achieve the compliance.”

7. Accordingly, this Tribunal directed the Chief Secretary, UP to ensure that untreated sewage was not discharged directly into the river Ganga and atleast temporary arrangements for disinfection/water treatment was done and necessary action was initiated against the officer concerned for illegal action of permitting discharge of untreated sewage and effluents directly into the River Ganga.
8. The matter has been taken up today for further consideration. Report dated 30.10.2019 filed by the CPCB is to the effect that CPCB in coordination with the UPPCB carried out resampling of ground water and analyzed the same finding as follows:

*“1. Analysis results of samples collected from Khan-Chandpur, Rania, Kanpur- Dehat, UP, reveals that Total Dissolved Solid (TDS), Total Chromium (**Trivalent and Hexavalent Chromium**), and Fluoride concentrations are higher than BIS acceptable limit for drinking water. In few samples,*

iron and sulphate were also found above BIS acceptable limit for drinking water.

2. Concentration of total chromium at 3 locations was found 1.87, 42.2 and 7.48 mg/L, respectively, which much higher than safe limit of 0.05 mg/L, i.e. BIS acceptable limit for drinking water. In these samples, concentration of toxic hexavalent chromium was also found as 3.37 and 13.95 mg/L.
3. Coloured water was found in hand-pumps and bore-wells (shown in picture at Annexure-I & II) and it indicates presence of toxic hexavalent chromium.
4. Concentration of Chromium (Total) at the location sampled by 'Justice Arun Tandon Committee' was found to 42.2 mg/L, which is more than earlier sample of the Committee. Such variance is attributed to improper preservation and delay in submission of sample. A comparative analysis report is giving below:

Heavy Metals (mg/L)	BIS (2012) Acceptable limit for Drinking Water	Justice Arun Tandon Committee's sample	Repeat sample collected by CPCB team
As	0.01	BDL	BDL
Cd	0.003	BDL	BDL
Co	-	BDL	BDL
Cr⁶⁺	0.05	28.34	42.2
Cu	0.05	BDL	BDL
Fe	0.3	0.04	0.78
Mn	0.1	0.1	0.13
Ni	0.02	BDL	BDL
Pb	0.01	BDL	BDL
Se	0.01	BDL	BDL
Sb	-	BDL	BDL
Ve	-	0.01	0.02
Zn	5	0.44	0.86

Results of samples collected from Rakhi-Mandi, Kanpur, reveal that TDS, Total Chromium, Fluoride and Sulphate concentrations are higher than BIS acceptable limit for drinking water. Concentration of total and hexavalent Chromium was found between 0.05 to 1.03 mg/L, which is higher than BIS acceptable limit of drinking water for total chromium. Health risk based standard for hexavalent Chromium concentrations will be much lesser than 0.05 mg/L, as assessed in case of other similar sites.

6. As per analysis of samples at Khan-Chandpur, Rania and Rakhi Mandi, Kanpur indicates that groundwater in both of these sites has been contaminated with hexavalent chromium above the drinking water standards by many folds. However, concentration values observed at Rakhi-Mandi, Kanpur are relatively lesser than Khan-Chandpur, Rania.
7. Both the contaminated sites located at Khan-Chandpur, Rania and Rakhi-Mandi, Kanpur would require

remediation of groundwater by adopting appropriate technologies such as pump-and-treat system. However, prior to groundwater remediation, it is required to remove chromium-bearing waste along with contaminated soil from dumpsites. In case of Khan-Chandpur, Rania, directions were already passed by Hon'ble NGT in the matter of OA 200/2014 dated 07/08/2019 and also in OA no 985/2018 for removal of chromium waste from dump site."

9. Report of the Chief Secretary, UP is that Executive Officer, Nagar Panchayat, Akbarpur has been directed to supply drinking water through tankers in the affected areas around Khanchandpur, Rania, Kanpur Dehat. Principal Secretary, Rural Development, UP has been asked to establish Piped Water Supply (PWS) in the affected areas. The District Magistrate, Kanpur Dehat and Principal Secretary, Panchayati Raj, UP have been directed to seal identified handpumps/borewells. Potable water supply already available for Rakhi Mandi is to be augmented. The Principal Secretary, Medical and Health has been asked to organize health checkup camps and to provide treatment. Direction has also been issued for *in-situ* safe disposal of Chromium dumps under the guidance of CPCB. UPPCB has identified six industries responsible for dumping of the waste. The said industries were closed in the year 2005. Environmental Compensation of Rs. 280.01 crore has been assessed to be recovered from the said industries. Closure order has been issued against 122 tanneries to prevent flow of effluents in the CETP which did not have sufficient capacity and also to prevent discharge in irrigation channel on 01.10.2019. There is nothing to show action in terms of recovering environmental compensation for the past damage. Further, explanation for permitting discharge of large quantity of sewage containing toxic Chromium directly into the River Ganga vide order dated 08.08.2019 is that it was inevitable on account of

cleaning of the old trunk sewer line in larger public and environmental interest. No comment has been made about non-compliance of Faecal Coliform standards.

10. We have heard learned Amicus, learned Additional Advocate General for the State of Uttar Pradesh and the learned Counsels for the UPPCB, CPCB and UP Jal Nigam.

11. It is undisputed that Chromium dumps containing toxic hexavalent Chromium (**as mentioned in the report of the CPCB quoted above**) has been in existence since 1976 and requisite steps have not been taken so far to dispose of the same as per mandate of law. Chromium is considered to be an environmentally hazardous element and classified as class-A human carcinogen.¹ Hexavalent Chromium Cr (VI) is toxic and the World Health Organization (WHO) has classified it as carcinogenic and can cause stomach ulcers and cancers and severe damage to kidneys and liver.² The industries responsible for generating the said dumps were closed in the year 2005. The SPCB has assessed liability of environmental compensation of Rs. 280.01 crore only on 24.10.2019. There is no explanation why no such step was taken against the said industries earlier. We may note that this Tribunal has been issuing directions for shifting of the Chromium dumps but the State of UP has failed to do so. The direction of this Tribunal has already been quoted above from the order dated 22.08.2019 (para 24). Such directions were also issued earlier vide order dated 13.07.2017.

¹ <http://www.isca.in/rjcs/Archives/v7/i7/7.%20ISCA-RJCS-2017-024.pdf>

² https://www.who.int/water_sanitation_health/waterquality/guidelines/chemicals/chromium.pdf?ua=1

12. From the above, it is clear that there is failure on the part of State of UP and its authorities in disposal of the Chromium dumps which is hazardous to the public health and the environment and the proposal now mentioned in the report of the Chief Secretary, UP is for *in-situ* remediation though earlier stand of the State of UP was to shift the Chromium waste to the Treatment Storage and Disposal Facility (TSDF) for hazardous waste as per Hazardous Waste Management Rules, 2016. The fact remains that the problem has not been tackled for the last 43 years and it has resulted in contamination of ground water affecting the health and life of the inhabitants and fauna. Compensation has been assessed only in the year 2019 without it being clear whether there is a chance of actual recovery of the same. There is no explanation for earlier inaction by the State of UP and the UPPCB.

13. For this failure, under the Public Trust Doctrine, the State is liable to deposit the said assessed amount in an ESCROW account for restoration of environment and the public health in the area. Such deposit may be made within one-month from today. The amount may be spent after preparation of an action plan by the District Magistrates and the SPCB with the approval of the CPCB. The ESCROW account will be operated by the concerned District Magistrate in terms of action plan. The State will be at liberty to recover the amount from the erring industries and/or from the erring officers who failed to take necessary action.

For measures to be adopted to utilize the amount, it will require a credible study of the health issues in the area. This may be done by an Expert Committee comprising representatives from (1) S.N. Medical College, Kanpur, (2) PGI Lucknow, (3) RML Lucknow

and (4) a nominee of Secretary, Health, Ministry of Health, Govt. of India. The nodal agency will be the Principal Secretary, Medical & Health, UP.

14. With regard to supply of potable water in the affected areas, such supply should take care of not only drinking purposes but also other purposes. It is well known that adverse effect on health is not only by drinking contaminated water but also on account of bathing or cooking and also on account of it being part of the food chain. It is necessary to put the concerned inhabitants in the area to notice of adverse consequences of use of contaminated water and placing the data of contents of water quality on website of the State. The affected area should also be delineated and put in public domain.
15. PWS must be established as is said to have already been directed by the State expeditiously positively from 01.03.2020. Since in Rakhi Mandi pipe carrying potable water is already available, such supply may be made operational positively by 15.01.2020 i.e. within two months, which is the timeline proposed by the State itself in its affidavit.
16. With regard to illegal permission granted by the Principal Secretary, Urban Development on 08.08.2019 for release of large quantity untreated sewage directly into river Ganga on the ground of cleaning trunk sewer, the explanation furnished cannot be accepted as no assessment of pollution load and its constituents was made. It was not considered that the sewage/effluents had highly toxic Chromium content. Its impact on recipient water of river Ganga and the downstream inhabitants who will use such water was not considered. The action taken cannot by any standards be considered

to be a responsible action of a welfare State and shows total apathy for the environment and the health of the inhabitants and the rule of law.

Moreover, it is only after the order of this Tribunal that a decision has been taken to close operation of 122 tanneries which were discharging untreated industrial effluents with hazardous contaminants in irrigation channel through CETP and thereafter directly in the River Ganga as CETP did not have the requisite capacity. This action has been taken only on 01.10.2019. Tannery industries in India are contributing high Chromium contamination to the environment. These industries of India alone are reported to contribute about 2000-3000 tonnes of Chromium contamination to the environment in which Chromium concentration ranges from 2000- 5000 mg/L in the aqueous effluent.³

17. The stand of the State of UP shows that it is being understood in certain quarters that during monsoon any pollution load, including sewage or any other polluting effluents can be discharged in the water bodies/rivers which is clearly against the mandate of Section 25 of the Water (Prevention and Control of Pollution) Act, 1974. The CPCB may need to issue an appropriate direction to ensure that such illegality does not take place anywhere in the country.
18. The State of UP has to be held liable to pay compensation to the extent of Rs. 10 Crores for violation of law affecting the environment and public health for illegally permitting discharge of sewage and other effluent containing toxic Chromium directly into river Ganga.

³ Dhal B., Thatoi H.N., Das N. and Pandey B.D. (2013). Chemical and microbial remediation of hexavalent chromium from contaminated soil and mining/metallurgical solid waste: A review. *Journal of Hazardous Materials*, 250, 272-291.

The quantum of compensation is being fixed having regard to the magnitude and nature of pollutant. The report of the Chief Secretary in para 12 clearly accepts that the effluents of 122 operational tanneries now closed from 01.10.2019 was part of the discharge on account of stoppage of flow of effluents in CETP. Further in para 13 it is stated that UP Jal Nigam was allowed to discharge effluents into river Ganga pending cleaning of trunk sewer and non-functioning of STP. Annexure 9 to the affidavit which is a report of the Principal Secretary, Urban Development mentions that the trunk sewer of dia. of 2100x2300mm was required to be cleaned which had capacity to carry 100 MLD sewage to cluster of STP of 205 MLD capacity. Main sewer line was damaged by tanneries mixing industrial waste into domestic waste which increased load for treatment on STP. This led to mixing of Chromium in sewage water rendering sludge unusable and harmful for the agricultural fields. Liability of any authority undertaking hazardous activity having potential for injury to environment and public health is well known.⁴ Principles for determining quantum are well settled.⁵ Compensation has to be approximate to the cost of restoration and where exact data is not available, broad approximation having regard to attending circumstances is permissible. We have fixed the quantum in the light of these well-known principles.

Even if adequate dilution was available, the pollution load that too loaded with toxic Chromium is undoubtedly bound to affect the

⁴ M.C. Mehta vs. Union of India 1987 (1) SCC 395

⁵ Sterlite Industries (India) Ltd. v. Union of India (2013) 4 SCC 575 : ¶ 47, T.N. Godavarman Thirumulpad v. UOI & Ors. (2006) 1 SCC 1 : ¶ 1, Indian Council for Enviro-Legal Action & Ors. v. Union of India & Ors. (1996) 3 SCC 212 : ¶ 67, Vellore Citizens Welfare Forum v. UOI , (1996) 5 SCC 647 : ¶ 11 to 13, M.C. Mehta v. Kamal Nath (1997) 1 SCC 388 : ¶ 10 , Public Trust Doctrine, ¶ 24, M.C. Mehta v. UOI & Ors., W.P (C) No. 13029/1985 order dated 24.10.2017, MCD v. Uphaar Tragedy Victims Association (2011) 14 SCC 481 : ¶ 99, 100, Vadodra Municipal Corporation v. Purshottam v. Murjani & Ors. (2014) 16 SCC 14 : ¶ 17 and M. C. Mehta & Anr. v. Union of India (1987) 1 SCC 395 : ¶ 32.

water quality at one or other place and has potential to endanger the health and lives of people. The Principal Secretary, Urban Development had no legal jurisdiction to permit such illegality in violation of Section 25 of the Water (Prevention and Control of Pollution) Act, 1974.

The UPPCB, unfortunately, has not taken any action against such illegality and against polluting 122 tanneries for a long time for which the UPPCB has to be held liable to pay compensation of Rs. 1 Crore.

The UP Jal Nigam is also liable for such neglect as it released untreated large quantity of sewage containing toxic Chromium in river Ganga. UP Jal Nigam is held liable for environment compensation of Rs. 1 Crore. The said amounts may be deposited with the CPCB within one month from today which may be overseen by the Chief Secretary, UP. The State of UP will be at liberty to recover the amount from the erring officers, apart from taking appropriate disciplinary or other departmental action in accordance with law.

19. We may now sum up our directions as follows:

- i. The State of UP is held liable for failing to take any action for shifting of Chromium dumps at Rania and Rakhi Mandi which resulted in damage to the environment and the public health for the period from 1976 till date. The amount of compensation in this regard is held to be the amount assessed by the UPPCB to be recovered from the erring industries. Till such recovery, the State itself must pay the amount by way of transfer to an ESCROW account. The amount is to be utilized for restoration

of the environment and the public health in the area in the manner mentioned earlier. The State of UP is at liberty to recover the amount from the erring industries or erring officers as already mentioned in para 13 above.

- ii. The State of UP must take further steps for disposal of the hazardous Chromium dumps as per directions of this Tribunal dated 22.08.2019 quoted above, failing which it will be liable to pay compensation as mentioned in the said order.
- iii. State of UP is held liable to pay environmental compensation of Rs. 10 crores for damage to the environment for permitting discharge of untreated sewage containing toxic Chromium into river Ganga directly vide its order dated 08.08.2019. The State of UP is at liberty to recover the amount from the erring officers apart from taking action against the persons responsible in the manner as already mentioned in para 18 above. The UPPCB is held liable to pay sum of Rs. 1 crore for ignoring illegal discharge of sewage and other effluent containing toxic Chromium directly into river Ganga and taking action after a long time inspite of earlier proceedings before this Tribunal. UP Jal Nigam is held liable to pay sum of Rs. 1 crore for releasing untreated large quantity sewage containing toxic Chromium in river Ganga. These amounts may be deposited with the CPCB within one month which may be overseen by the Chief Secretary, UP. UPPCB is at liberty to recover the amount from the erring industries.
- iv. The State of UP may take steps for supply of potable water to the inhabitants of the area and other steps as already mentioned in paras 13 to 15 above.

- v. The Expert Committee in terms of para 13 above may conduct the health survey within three months.
- vi. CPCB may issue appropriate directions to ensure that no authority allows discharge of polluted sewage or polluted effluents directly into a water channel or stream in violation of law even in monsoon and also the standards for faecal coliform are duly maintained.

20. Compliance report of the above directions may be filed by the Chief Secretary, UP before the next date by e-mail at judicial-ngt@gov.in.

Copies of this order be sent to S.N. Medical College, Kanpur, PGI Lucknow, RML Lucknow, the Secretary, Health, Ministry of Health, Govt. of India and the Principal Secretary, Medical & Health, UP, District Magistrates, Kanpur Nagar and Kanpur Dehat and CPCB by e-mail for compliance.

List again on 07.02.2020.

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S.P Wangdi, JM

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Dr. Nagin Nanda, EM

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