

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,  
Principal Bench, New Delhi**

Original Application No. 985/2019

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

With

Original Application No. 986/2019

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

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(Dr. A.K. Vidyarthi)

Scientist -E

Central Pollution Control Board,  
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Delhi- 110032

Date: 30.07.2021

Place: Delhi

**Compliance Report on behalf of CPCB in compliance to Hon'ble NGT Orders dated 08<sup>th</sup> February, 2021 in the matter of O.A. No. 985/2019 with 986/2019**

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Hon'ble NGT in the above mentioned order dated 08<sup>th</sup> February, 2021 (**Annexure I**) directed that:

*"The report discussed above, only relates to scientific disposal of chromium dumps at three locations. Nothing is mentioned about the second issue of continued pollution by tanneries as well as discharge of untreated sewage into the irrigation canals and drains at and around Jajmau. Requisite remedial action may now be taken expeditiously and a report furnished alongwith the further action taken report on remediation of dump sites with compliance status as on 30.06.2021, by 15.07.2021"*

Common Effluent Treatment Plant (CETP), Jajmau and Common Chrome Recovery Plant (CCRP), Jajmau were inspected by the teams of officials from CPCB on 30.06.2021 and 17.06.2021 respectively for compliance verification. The detailed inspection reports of the same are placed as **Annexure II** and **Annexure III** respectively. The following observations were made by the inspection teams:

**CETP, Jajmau**

- i. CETP was found operational during inspection and operating at a utilized capacity of 39.21 MLD.
- ii. The CETP was operating without valid consent.
- iii. Flow meters installed at inlet of tannery channel, outlet of CETP and TEPH were found defunct.
- iv. Raw tannery effluent received at the tannery channel inlet was not meeting the standards for CETP prescribed by UPPCB for **TSS (7701 mg/l against norms of 600 mg/l) and total Chromium (132 mg/l against 10 mg/l)**.
- v. Total Chromium-3.6 mg/l has been detected in domestic sewage inlet at CETP which indicated that illegal operations were being carried out in Jajmau, Kanpur and chrome

bearing effluent and sludge was being discharged into the domestic drains by tannery units at Jajmau, Kanpur.

- vi. CETP inlet (tannery effluent + domestic sewage) was not meeting the standards prescribed by UPPCB for **TSS (1005 mg/l against norms of 600 mg/l) and total Chromium (16.8 mg/l against 4 mg/l)**.
- vii. Treated effluent at outlet of CETP was found non-complying w.r.t. treated effluent discharge standards notified by MoEF&CC vide notification dated 01/01/2016 under E (P) Act, 1986 and the Rules framed under for **BOD (194 mg/l against norm of 30 mg/l), COD (431 mg/l against norm of 250 mg/l), TSS (146 mg/l against norm of 100 mg/l), chloride (1990 mg/l against norm of 1000 mg/l) and sulphide (182 mg/l against norm of 2.0 mg/l) and Total Chromium (8.4 mg/l against norm of 2.0 mg/l)**.
- viii. After mixing of treated effluent of CETP with treated effluent of all three STPs (05 MLD, 130 MLD and 43 MLD), Fixed Dissolved Solids (FDS) were meeting CETP discharge standards notified by MoEF&CC vide notification dated 01/01/2016 under E (P) Act, 1986 (**FDS-1602 mg/l against 2100 mg/l**).

### **CCRP, Jajmau**

- i. The CCRP is operated by Kanpur Nagar Nigam. The exhausted chrome tanned liquor collected from various tanneries is transported through tankers to the CCRP and regenerated chrome is to be sold to tanneries for reuse.
- ii. CCRP was operational during inspection.
- iii. It was informed that the chrome recovery system is operated intermittently depending on the receipt of chrome liquor from the tannery units and sufficient quantity of chrome liquor is ensured before running.
- iv. Only 117 tanneries are member of CCRP
- v. Analysis report indicated pH-3.74, Chromium (VI)- BDL and Total Chromium-1680 mg/l in raw effluent (CCRP inlet/Equalization tank) and pH-7.86, Chromium (VI)-BDL and Total Chromium-0.32 mg/l in treated effluent (CCRP outlet).
- vi. Only 1.5-7.5 MLD exhausted chrome liquor was collected from member tannery units during June 1-15, 2021 (as per logbook) indicates that member units are not giving liquor to CCRP for chrome recovery. The domestic sewage inlet channel was also receiving significant amount of Chromium therefore there is a possibility of discharge of chrome liquor/effluent into drains/river Ganga.
- vii. The treated effluent, after chrome recovery, was sent to Inlet of raw tannery effluent channel of 36 MLD CETP, Jajmau, Kanpur.
- viii. Flowmeter/v-notch has not been installed at inlet/outlet of the CCRP to measure the untreated/treated volume of effluent.
- ix. Poor record keeping was observed during inspection. Logbook for treatment of chrome liquor was not maintained.
- x. CCRP was not having a valid consent from UPPCB under Water (Prevention and Control of Pollution) Act, 1974. Record of authorization for disposal of hazardous sludge was also not provided during inspection.

Thus, in view of the non-compliance observed of CETP, Jajmau and its member tannery units, directions under Section 18 (1) (b) of Water Act, 1974 dated 23<sup>rd</sup> July, 2021 were issued to Uttar Pradesh Pollution Control Board by CPCB to take appropriate action against the **CETP, Jajmau and its member units and CCRP, Jajmau** which may include closure or levying Environmental Compensation as deemed fit following appropriate procedure. The detailed directions are placed as **Annexure IV**.

Now this compliance report is submitted to Hon'ble NGT for consideration.

Item Nos. 02&03

Court No. 1

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

Original Application No. 985/2019

(With reports of Oversight Committee dated 23.12.2020  
& State PCB dated 29.01.2021)

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

**With**

Original Application No. 986/2019

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

Date of hearing: 08.02.2021

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Applicant: Ms. Katyayni, Adv. (Amicus Curiae)

Respondent(s): Mr. Amit Tiwari, Adv. for State of UP  
Mr. Raj Kumar, Adv. for CPCB  
Mr. Pradeep Misra, Adv. for UP PCB  
Mr. I. K. Kapila, Adv. for UP Jal Nigam

**ORDER**

1. This order is in continuation of order dated 16.07.2020. 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 adversely affecting the health and depriving the inhabitants of access to drinking water. Second issue relates to continuing water pollution by tanneries discharging untreated industrial effluents, containing toxic Chromium into the irrigation canal through inadequately functioning CETP at Jajmau, UP.

2. The status of compliance was reviewed on 15.11.2019 with reference to the report of the CPCB dated 30.10.2019 and earlier proceedings before this Tribunal. It was observed:

- “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.<sup>1</sup> 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.<sup>2</sup> 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.*
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*

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

<sup>2</sup> [https://www.who.int/water\\_sanitation\\_health/waterquality/guidelines/chemicals/chromium.pdf](https://www.who.int/water_sanitation_health/waterquality/guidelines/chemicals/chromium.pdf)

*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.<sup>3</sup>

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. 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.<sup>4</sup> Principles for determining quantum are well settled.<sup>5</sup> 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 water quality at one or other place and has potential to endanger the health and lives of people. The Principal*

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<sup>3</sup> 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

<sup>4</sup> M.C. Mehta vs. Union of India 1987 (1) SCC 395

<sup>5</sup> 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.

*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 in spite 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](mailto:judicial-ngt@gov.in).”*

3. The matter was last considered on 16.07.2020 in the light of the reports of the Chief Secretary, UP dated 04.02.2020 and 11.06.2020 and report of CPCB dated 14.07.2020 which were dealt with as follows:-

“1 to 3.....xxx.....xxx.....xxx

4. *The report of the Chief Secretary, U.P is that an action plan has been prepared for restoration of the environment and certain steps have been taken for supply of water to the inhabitants. Further report dated 11.06.2020 is that the matter of remediation is at the tender stage. The report of the CPCB is of a general nature.*

**5. The fact remains that the chromium dump containing toxic chemicals has not been shifted to the TSDF as required under the law for which failure of the State of U.P is continuing inspite of repeated directions showing lack of sensitiveness on the part of the concerned officers. Hazard to public health and environment continues. The process of remediation can only start only after shifting of the waste to operational TSDF.**

**6. Having regard to the seriousness of the consequences for continued delay on one pretext or other, we direct the Chief Secretary, U.P to ensure prompt action on priority basis in a time bound manner which may be personally monitored by the Chief Secretary, U.P. The Committee constituted by this Tribunal headed by Justice S.V.S. Rathore, former Judge of the Allahabad High Court may also oversee the compliance of this direction and give its independent report by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support**

PDF and not in the form of Image PDF. It is made clear that the Tribunal may have no other option except to take coercive measure for any further default by the State of U.P. Compliance status as on 31.10.2020 may be reported to this Tribunal before the next date by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.”

4. Accordingly, further reports have been filed by the Oversight Committee dated 11.09.2020 and 23.12.2020 and by the State of UP on 29.01.2021. It will be suffice to refer to the latest report of the Oversight Committee dated 23.12.2020 giving the compliance status and making recommendations as follows:-

**“Summary of the compliance status**

<b>S. No.</b>	<b>Directions issued by Hon’ble NGT</b>	<b>Concerned Department</b>	<b>Compliance status</b>
1.	Status of lifting and remediation of Chromium dump at Rania, Kanpur Dehat by the TSDF operators	UPSIDA	<b>Non-complied</b> The lifting of Chromium dump has not started yet. Letters have been sent to NEERI, IIT Kanpur, IIT Roorkee, IIT BHU, and IIT Delhi to provide consultancy regarding tender conditions and estimations and decision will be taken once the proposals are received by the said institutes.
2.	Status of ETPs/CETPs installation to prevent untreated discharge of industrial effluents in river Ganga and its tributary	UPJal Nigam	<b>Partially complied</b> A 20 MLD CETP is being constructed in Jajmau. The tender processing is done and around 10 percent work is completed, and rest is under process. The construction of CETP will be completed by 31st December, 2021.
3.	Status of health survey by the Health Department	Health Department	<b>Partially complied</b> Health Department has submitted a detailed survey report undertaken in Rania and Rakhi Mandi areas. While, no details are provided in case of Jajmau area. Health Survey must be conducted at least twice a month.
4.	Steps taken for the supply of potable water to the residents of the affected area.	UP Jal Nigam	<b>Complied</b> Safe water is being provided to all the four hamlets viz. Chauhanpurva, Palpurva, Yadavpurva and Prasiddhipura of the village Khanchandpur, Rania.
5.	<b>Status of recovery of EC:</b> UP Jal Nigam is held liable to pay a sum of Rs. 1 Crore for	UP Jal Nigam	<b>Non-complied</b> UP Jal Nigam has filed a Civil appeal on 07.08.2020 before the Hon’ble Supreme Court against the said order

	releasing untreated large quantity sewage containing toxic chromium in river Ganga		of the Hon'ble Tribunal and is waiting for the decision of the Hon'ble Supreme Court which is listed on 06.01.2021. However, till date no order has been passed in favour of UP Jal Nigam.
6.	<p><b>Status of recovery of EC:</b> 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.</p> <p>The State of UP has 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.</p>	UPPCB	<p><b>Non-complied</b></p> <p>Till date no EC has been paid by UPPCB</p>
7.	Status of recovery of EC on erring industries	UPPCB	<p><b>Partially Complied</b></p> <p>A show-cause notice has been issued for the recovery of EC of Rs. 280.01 Crore imposed on 6 erring industries. Out of 280.01 Crores, 23.44 crore has been deposited in ESCROW account of DM, Kanpur Nagar by the Industrial Development Department. The remaining EC will be deposited by UPPCB after the recovery of EC from 6 erring industries. RC has already been issued against erring industries for the recovery of EC</p>

## RECOMMENDATIONS

In view of the above, we recommend as follows:

1. With regard to the safe disposal of chromium dump at Rania, Kanpur as ordered by Hon'ble Tribunal in O.A. No. 200/2014 in RE: M.C. Mehta vs Union of India & Ors., neither a single truck load has been shifted to the nearby operational TSDF nor the penalty for non-compliance of this order has been paid. **The Chief Secretary, UP may be directed to take concrete actions regarding shifting of chromium dumps and sort out the matter immediately. He may also fix the responsibility for inaction. The committee further recommends serious action in this matter against the concerned officers. Such action may be by giving adverse entries to them and also to initiate disciplinary proceedings against the officers concerned.**

2. ***In regard to the EC imposed on UP Jal Nigam and UPPCB for illegal discharge of untreated sewage into river Ganga, so far, no amount has been deposited. The concerned departments UPPCB and UP Jal Nigam may be directed to deposit the said amount without any further delay. However, the said amount may be subjected to the final outcome of the Civil Appeal filed by UP Jal Nigam in the Hon'ble Apex Court.***

3. ***EC of Rs. 280.01 .Cr has been imposed on 6 erring industries which has not been recovered so far. The SPCB may be directed to invoke Recovery Certificates (RCs) and follow up vigorously for recovery of EC from these units. The State Government has in the meanwhile sanctioned Rs 23.44 Crores from its budgetary resources. The State Government may also be directed to take stringent measures in recovery of this amount and use this amount in remediation of the contaminated areas.***

4. ***As far as the health surveys are concerned in the contaminated areas, the Health Department has submitted a report on 11.12.2020 and 15.05.2020 which are indicative in nature. Principal Secretary, Directorate of Health, UP may be directed to conduct a comprehensive study and prepare an action plan so as to ascertain the exposure and health effects caused due to chromium dump in the nearby areas, and efforts for mitigation and prevention of its ill-effects at the earliest.***

5. ***In order to prevent the violations in pollution norms, a 20 MLD CETP is under construction in Jajmau. UP Jal Nigam may be directed to expedite the construction of CETP so that it gets completed in time bound manner.***

6. ***There needs to be 24x7 monitoring of effluent treatment in such clusters. Already 122 tannery units in Kanpur have been closed down for violation of Pollution norms. The CETPs of such clusters be connected with the Central Control Room at Lucknow through OCEMS for 24x7 monitoring of environment parameters.***

7. ***Reverse boring is another important area that needs to be addressed, especially in environmentally sensitive areas like tannery clusters which are vulnerable to ground water contamination on the sly. The tendency of some units to discharge their effluents by boring a hole in the ground, thereby contaminating ground water needs to be quelled with deterrent punishment. CGWA/SGWA may be directed to take actions in this regard. The CGWA/SGWA field machinery needs to be strengthened where the complaints of groundwater contamination are plenty. A shallow borewells may be installed around such areas and regular monitoring of groundwater quality from those borewells may be undertaken so as to have a check on contamination levels. Alternately, hydrogeological contamination studies may also be carried on in such areas.***

8. ***The Urban Development Department may be directed to identify and mark Buffer Zone around the Chromium dump areas.***

9. ***To ensure the proper chromium management practices in tannery clusters/units, the industries may be directed to install chromium recovery plants based on Tamil Nadu model and implement the recovery and reuse techniques. Also, norms should be very stringent for discharge of untreated sewage into the drains/rivers.***

10. ***While several alternatives to chrome-based tanning is available, the industries may be directed to***

**exploit the techniques of chrome-free or blending of chrome with other minerals for tanning purposes. Moreover, the industries must partner with research institutes to develop such alternatives.**

**11. The use of titanium instead of chromium in tanning process may result into light and strong leather which is also biocompatible with human tissues as proposed by project "TILEATHER" in EU. Such researches may also be promoted in India to develop chrome free leather production.**

**12. The strategies of bioremediation using chromium tolerant bacteria and/or phytoremediation using hyper accumulating plants may be promoted as post chromium dump cleaning process to prevent the leaching of contaminant in soil and water.**

**13. The approaches such as "Microbial-based Phytoremediation" which is based on the association of metal tolerant bacteria in rhizosphere of hyper accumulating plant may also be undertaken as post chromium treatment in highly contaminated environment.**

**14. Researches may be promoted for alternative use of solid wastes from tannery industries. Among the main applications of solid tannery wastes, the following stand out production of adsorbent materials, biodiesel, biogas, biopolymers, applications in agriculture and other applications involving extraction/recovery of compounds of industrial/commercial interest, isolation of microorganisms and production of enzymes and applications in the animal diet.**

**15. The approach of secondary recycling may be explored for recovery of resources and value-added products synthesis from chromium rich wastes such as cements, abrasives, glass, tiles, bricks, and pigments.**

**16. In order to prevent the bioaccumulation and bio magnification of chromium or other metals in the area, Health Department may be directed to carryout soil metal analysis in the agricultural lands near to the tannery industrial areas."**

5. The report filed on 29.01.2021 on behalf of the State UP in response thereof is as follows:-

**"1&2.....xxx.....xxx.....xxx**

**3. Further, the Chief Secretary, Government of U.P. has also reviewed the status of compliance through review meetings of the officials of concerned Departments on 09.07.2020 and 02.12.2020. The Chief Secretary, Government of U.P. also reviewed the Status of compliance of observations/recommendations made by the Oversight Committee through its report dated 23.12.2020 on 28.01.2021. Copies of the minutes of meetings dated 09.07.2020, 02.12.2020 & 28.01.2021 are enclosed herewith and marked as Annexure No. 1, 2 & 3.**

4. In the review meetings, the status of compliance of the directions regarding disposal of chromium waste at Khanchandpur, Rania, Kanpur Dehat was discussed and following progress has been observed:-

a. That Uttar Pradesh State Industrial Development Authority (UPSIDA) has invited e-tenders three times for disposal of chromium waste dumped near Village Khanchandpur, Rania, but only one bid was received and the cost mentioned by bidder was more than the estimated cost in the DPR prepared by CPCB. Therefore, the bids were not approved.

b. NEERI, IIT Kanpur, IIT Roorkee, IIT BHU, and IIT Delhi to provide consultancy regarding revised tender conditions and cost estimations etc. The decision will be taken by UPSIDA after the proposals are received from the said institutes. UPSIDA further informed in the meeting that Indian Institute of Technology, Kanpur (IIT, Kanpur) has given acceptance to provide consultancy regarding tender conditions and cost estimations. Fresh tender will be floated on the basis of revised tender conditions and cost estimations suggested by IIT, Kanpur.

c. That the Chief Secretary, Government of U.P. has directed in the review meeting dated 28.01.2021 that UPSIDA will get the report regarding technology, cost estimates and tender document prepared by IIT, Kanpur expeditiously within one week. After that the report shall be technically examined by the technical committee under the Co-chairmanship of Secretaries of Environment, Forest and Climate Change and Department of Infrastructure and Industrial Development UPSIDA shall call tender on the basis of technical approval of the Committee expeditiously, so that the work may be started.

**d. That Piped Water Supply (PWS) to the residents of affected area of Rakhi Mandi, Kanpur Nagar was commissioned on 15.01.2020. Safe Water Supply through PWS is being provided since then continuously to inhabitants of the affected area through 2510 meter pipe line and 225 household connections.**

e. That supply of safe water to the residents of village Khanchandpur, Rania through Piped Water Supply System has been started since 15th July, 2020.

f. That in compliance to the directions regarding health survey in affected areas, **the Expert Committee constituted by Hon'ble Tribunal has submitted its preliminary assessment report after visiting the sites along with the methodology for Comprehensive Baseline Assessment and Mitigation Measures on 28-12-2019. Final report of Committee regarding Comprehensive Baseline Assessment and Mitigation Measures is awaited. Director, Medical & Health Services has informed that in village Khanchandpur health camps were organized every Saturday and Sunday from 02-02-2020 to 14-03-2020 and no signs of the adverse health effects of chromium were found on the patients examined during health camps. The Chief Secretary, Government of U.P. has directed in the review meeting dated 28.01.2021**

**that the Principal Secretary, Medical and Health shall ensure the submission of report regarding Comprehensive Baseline Assessment and Mitigation Measures within one month.**

5. That it is submitted that UP Pollution Control Board had imposed Environmental Compensation of Rs. 280.01 Crore against 06 defaulting industries on 19-11-2019 and Recovery Certificates (RCs) against the above 06 defaulting industries were issued as submitted in the previous compliance report. It is further submitted that the industries responsible for illegal dumping of chromium waste had filed Original Application Nos. 18, 19, 20, 21 and 22 of 2020 before Hon'ble Tribunal for getting relief against imposition of environmental compensation by Uttar Pradesh Pollution Control Board. That Hon'ble Tribunal has disposed off all the connected cases vide its order dated 28.01.2020 with the following direction:- "Without expressing any opinion on merits, we direct that the impugned orders may be treated as a proposal with reference to which the applicants may furnish their response to the UP State PCB within two weeks. The UP State PCB may consider the objections of the applicants and pass an appropriate order within four weeks thereafter dealing with the matter on merits, in accordance with law".

That it is submitted that prior to imposition of environmental compensation upon the industries in question, the Uttar Pradesh Pollution Control Board (UPPCB) had issued the Show Cause Notices to these industries dated 24.10.2019 whereby time of 15 days was allowed to said industries for submitting their reply but none of the said industries submitted their reply in the time specified in the Show Cause Notice issued by UPPCB. Therefore, the environmental compensation was imposed on 19.11.2019 against the industries in question. Thus, the industries have obtained above order by concealing the facts before the Hon'ble Tribunal. Though U.P. Pollution Control Board had filed an application for modification of order dated 28.01.2020, yet UPPCB has considered the representation of said industries in compliance of Hon'ble Tribunal order dated 28.01.2020, in interest of justice and the Environmental Compensation imposed earlier against these industries had been reconfirmed through reasoned order dated 28.05.2020 after considering their representations. The copies of the said orders dated 28.05.2020 are enclosed herewith and marked as Annexure Nos.- 4, 5 6 7 & 8.

6. That it is further submitted that the industries responsible for illegal dumping of chromium waste filed Appeal Nos. 14, 15, 16, 17 and 18 of 2020 before Hon'ble Tribunal for getting relief in the matter of imposition of environmental compensation against them by Uttar Pradesh Pollution Control Board. That Hon'ble Tribunal has given following directions vide its order dated 04.01.2021 and has listed it for final hearing on 27.07.2021:-

*"The persons responsible for dumping such hazardous waste, which has contaminated the ground water to the detriment of the inhabitants, cannot disown responsibility for liability for such damage on the ground of inaction of the authorities or closing of the companies. Corporate veil may not be a defence to absolute liability for damage to environment. Of course, the liability of appellants has to be limited to the violations clearly*

attributable to them. **The State PCB must determine such liability specifically, after due opportunity to the appellants, preferably within a period of three months and till this is done, further coercive measures may not be taken.** It is made clear that any further proceedings will be subject to further orders.

5. The above observations are for interim relief and are subject to final order after further consideration. Applications for interim relief will stand disposed of accordingly."

That it is submitted that UPPCB has again given due opportunity to the appellants as per order of the Hon'ble Tribunal dated 04.01.2021 and will dispose of the appeals after due hearing as per law.

7. That the ESCROW account has been opened by District Magistrate Kanpur Dehat, for deposition of funds to be utilized for removing the dumped hazardous waste and restoration of the environment and the public health. State Government has transferred amount of Rs 23.44 Crore to the ESCROW account on 27.03.2020. The rest amount for remediation of chromium dump site Khanchandpur, Rania, Kanpur Dehat, could not be deposited in the ESCROW account due to non-recovery of Environmental Compensation imposed against the 06 industries, as they have obtained stay from the Hon'ble NGT on 28.01.2020 and 04.01.2021."

8. The submission of learned Amicus Curiae are:-

"1. That the Central Ground Water Board may be directed to do a detailed mapping of the impugned area. Because the contamination has continued unabated since 1976, a larger area may be at serious risk of Chromium pollution.

The water supply project sanctioned for Rania, Kanpur Dehat includes 2 tubewells for extraction of groundwater (as per Chief Secretary Compliance Report, pg. 3, para 10). It is therefore, important for CGWB to conduct a detailed survey of Kanpur District and mark zones according to current groundwater quality.

2. That Emergency Action needs to be taken for checking further leaching of Hexavalent Chromium due to coming Monsoons. The open dump site has to be covered (waterproofed) and bunds/ boundaries should be constructed around it to avoid inundation of rain water.

The Hon'ble Tribunal had passed the following directions vide order dated 15/11/2019 that:

"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.”

3. That the water supplied to Rania, Kanpur Dehat must be checked for quality and quantity assessment (as it is still provided @ 5 tankers/day). It may not be safe to provide drinking water directly from tubewells. According to the Compliance Report dated 11/6/20 by Chief Secretary,

“The safe water supply to the affected areas by direct pumping of the tubewells is proposed to be started by 15<sup>th</sup> July 2020.”

4. That it is pertinent to bring to your kind notice, order dated 15/11/2019, (para 14, pg 10) wherein the Hon’ble Bench directed that:

“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.”

The State must provide water not only for drinking but for other household activities and cattle feeding.

The impugned area should be delineated and dangers of such contamination may be displayed at public places to generate awareness amongst the residents & tourists.

5. That Action Plan for removal of Chromium waste should incorporate **Occupational Hazard**, as mining of legacy waste and transportation may expose workers/ labourers to serious health risk.

6. That Status Report on sealing of handpumps/ tubewells in the impugned area may also be furnished.

7. That the Hon'ble Tribunal had passed directions to specify norms for Tender processes. This must be executed with immediate effect to avoid further delay in starting restoration projects.

8. That the Hon'ble Tribunal vide order dated 27/9/19 had directed that:

“13. (ii) The Chief Secretary, UP, may ensure that untreated sewage is not discharged in River Ganga and pending a permanent solution, at least temporary arrangement by way of phytoremediation, bio-remediation or any other technology is done to disinfect/ treat water before the same is discharged into the River Ganga.”

*Similar direction was reiterated vide order dated 15/11/19, that:*

*“19 (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.”*

*As noted above, Status Report on temporary arrangements of disinfecting drains/ water bodies may also be submitted by the State. It is most urgent to treat streams/ drains before monsoons to avoid discharge of pollutants in River Ganga.*

9. *That the Compliance Report of CPCB (dated 14/7/20) noted that:*

*“It is submitted that none of the authorities have yet deposited the levied Environmental Compensation with CPCB till date as per the direction of Hon’ble NGT.” (as was directed vide order dated 15/11/2019).”*

9. During the hearing, it is pointed out by learned Amicus that from the website of the UP State PCB it is clear that apart from the above hazardous dump sites, there are other dumps as follows:-

1. Nauraiya Khera-Kanpur
2. Juhi Bahuraiya-Kanpur
3. Panki Industrial Area – Kanpur
4. India Pesticides Ltd, Deva Road- Lucknow

Details of the above are as follows:-

1. Nauraiya Khera-Kanpur

- Ground Water contaminated due to chromium.
- Industries nature- Steal welding, Electroplating, Powder coating, Metal Phosphating, Sodium hypochlorite trading unit, Lead Acid Batteries. Site used for dumping for last 20-25 years.
- Area-600 Sq. ft.

2. Juhi Bahuraiya-Kanpur

- Water at Juhi Baburaiya contaminated upto 100 feet & 60-70 feet slightly yellow and greenish.
- Water at 120 feet was found clear.
- Industries nature – Mainly BCS industries,
- Area 5-6 acre land.

3. Panki Industrial Area – Kanpur

- Water upto 50 feet contaminated.

- Nature of Industry- Dyes, Foundries, Tannery, Cotton, Textile, Carpet.
- Site coverage- 10 acre of land

4. India Pesticides Ltd., Deva Road- Lucknow

- Nature of Industries – Pesticide (technical).
- Area covered- 2 acre.
- No more pesticide waste is dumped.

10. It has also been pointed out that there are reports of mercury being present in ground water which necessitates cumulative impact study of the area in terms of possible adverse effect on food safety and health. There is also need for multispecialty health facilities for the affected inhabitants. Even though as per earlier health studies there is no adverse effect seen, in reality people are suffering from Cancer, Diabetes and other diseases on account of pollution. The study, thus, needs to be more credible.

11. Accordingly, in the light of above discussion, the State of UP may take further remedial action. Remediation of hazardous waste sites departmentally may be explored, as tender process has not succeeded in the last several years and the dump sites have been in existence for the last 45 years which continue to be hazard to the lives of the inhabitants. The additional sites pointed out above may also be remediated. This needs to be tackled on emergency basis at the highest level in the State and monitored at the level of the Chief Secretary and also the Oversight Committee. CPCB may be consulted in the process for the remedial action which should be as per rules. The action plan may also ensure provision for water supply to all affected areas. Further, it must be ensured that contamination does not affect the food chain. The stand of the State of UP with regard to compensation is not as per earlier order dated 15.11.2019, para 13. If the amount is not recovered from the companies for want of

effective legal steps for recovery within reasonable time, liability of the State for its negligence and inaction will continue.

12. The report discussed above, only relates to scientific disposal of chromium dumps at three locations. Nothing is mentioned about the second issue of continued pollution by tanneries as well as discharge of untreated sewage into the irrigation canals and drains at and around Jajmau. Requisite remedial action may now be taken expeditiously and a report furnished alongwith the further action taken report on remediation of dump sites with compliance status as on 30.06.2021, by 15.07.2021 by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

List for further consideration on 04.08.2021.

A copy of this order be forwarded to the CPCB, Chief Secretary, UP, UP State PCB, and the Oversight Committee headed by Justice S.V.S. Rathore, former Judge of the Allahabad High Court by e-mail for compliance.

Adarsh Kumar Goel, CP

S.K. Singh, JM

Dr. Nagin Nanda, EM

February 08, 2021  
O.A. Nos. 985/2019 & 986/2019  
A



# केन्द्रीय प्रदूषण नियंत्रण बोर्ड

## Central Pollution Control Board

क्षेत्रीय निदेशालय, लखनऊ

Regional Directorate, Lucknow

(पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार)  
(Ministry of Environment, Forest and Climate Change, Govt. of India)



आर.डी.एल./तक./एन.जी.आर.बी.ए./एन.जी.टी./ सी.ई.टी.पी./2020-21/328/240

जुलाई 09, 2021

सेवा में,

सदस्य सचिव,  
केन्द्रीय प्रदूषण नियंत्रण बोर्ड,  
'परिवेश भवन', अर्जुन नगर (पूर्व)  
दिल्ली- 110032

ध्यानाकर्षण: प्रभाग प्रमुख, डब्ल्यू.क्यू.एम.- II प्रभाग

विषय: एन.जी.टी. आदेश (OA No. 985/2019) दिनांक 08/02/2021 के अनुपालन में 36 एम.एल.डी सी.ई.टी.पी., जाजमऊ, कानपुर की सत्यापन आख्या के संबन्ध में  
संदर्भ: मुख्यालय आदेश सं. बी-19114/एन.जी.टी./डब्ल्यू.क्यू.एम.-II/सी.पी.सी.बी./2019-20/2279, दिनांक 16.06.2021

महोदय,

उपरोक्त विषय के संदर्भ में क्षेत्रीय निदेशालय लखनऊ की टीम द्वारा 36 एम.एल.डी सी.ई.टी.पी., जाजमऊ, कानपुर का सत्यापन कार्य दिनांक 30/06/2021 को पूर्ण कर लिया गया है। विस्तृत आख्या आवश्यक कार्यवाही हेतु सादर प्रस्तुत है।

भवदीय,

*A* 09/07/2021  
(आर. के. सिंह)  
क्षेत्रीय निदेशक

संलग्नक : यथोपरि



**Central Pollution Control Board**  
**Regional Directorate (North) Lucknow**

**Compliance Verification Report of 36 MLD CETP, Jajmau, Kanpur, UP**

**01. Background:** In compliance of Hon'ble NGT order dated 08.02.2021 (OA No. 985/2019 and 986/2019) and in pursuance of HO letter No. B-19114/NGT/WQM-II/ CPCB/2019-20/2279, dated 16.06.2021, monitoring of 36 MLD CETP, Jajmau, Kanpur was carried out by a Team of CPCB, RD, Lucknow on 30.06.2021. The observations made by the Team are summarised below:

**02. About CETP Jajmau:**

CETP Jajmau was setup in December 1994 with total treatment capacity of 36 MLD wherein as per design 9 MLD tannery effluent is to blended with 27 MLD sewage in a ratio of 1:3 (effluent: sewage). The CETP is being operated by Ganga Pollution Control Unit of UP Jal Nigam. The CETP operates on UASB based treatment system where effluent treated by anaerobic followed by aerobic (post-treatment) process is sent to irrigation channel for irrigation of crop lands and excess goes to River Ganga. Before discharging treated effluent from 36 MLD CETP, it is mixed with treated effluent of 130 MLD STP at TEPH (Treated Effluent Pump House) and then pumped to Irrigation Channel. Further the treated effluent of 43 MLD STP and 5 MLD STP is also pumped to irrigation channel where all treated effluent from these three STPs (05 MLD, 130 MLD and 43 MLD) get mixed thoroughly in irrigation channel. All three STPs were found operational on the day of visit.

The CETP comprises of: Screen & Grit Chamber for raw tannery effluent → Equalization Tank → Pumping → Mixing Tank (Adding domestic waste water from separate channel) → Pumping → UASB Reactor - I & II → Collection Well → Pre-Aeration Tank (HRT- 30 min) → Clari-flocculator - I & II → Final Outlet of CETP → TEPH (Treated Effluent Pumping House) → Irrigation Canal.

**03. Observations:**

1. The CETP was found operational without any consent from UPPCB.
2. During monitoring, the flow in tannery & domestic effluent channel reaching to the CETP was recorded by the team on V-notches installed at inlet channels at interval of every 2 hours (10:00 AM to 4:00 PM). The average flow during visit is tabulated as below:

Date	Average Flow in Tannery Channel of CETP (MLD)	Average Flow in Domestic Channel of CETP (MLD)
30.06.2021	15.43	23.78

3. The above data shows that the CETP is receiving excess effluent from tannery units (15.43 MLD) against designed capacity of 9 MLD. It is pertinent to point out here that all the CETP member units are allowed to operate at reduced capacity of 50%.
4. The mechanical screen installed at inlet tannery channel of CETP was found operational.
5. Flow meters installed at inlet of tannery channel, outlet of CETP & TEPH were found defunct.
6. Flow meters were not installed at the outlet of any of 3 STPs before being discharge into irrigation channel.
7. The composite samples were collected from Tannery Inlet, Domestic Sewage Inlet, Mixing Tank of CETP, Outlet of UASB, Final outlet of CETP, after TEPH (after mixing with 130 MLD STP) and Irrigation Channel/Canal (after mixing of all treated effluent from CETP & STPs). The results are summarized in Table I.

**Table 1: Analysis Result of 36 MLD CETP, Jajmau, Kanpur**

Parameters	Unit	Sample Location, Code and Standards										STP Discharge Standards as per NGT Order	
		Tannery Inlet Channel (9MLD) (RD 1)	PETP Outlet & Tannery Channel before mixing with domestic sewage (UPPCB Prescribed Standards)	Domestic Sewage Inlet Channel (27 MLD) (RD 2)	CETP Inlet (after mixing of Tannery effluent with domestic sewage in ratio of 1:3) (RD 3)	CETP Inlet (after mixing of Tannery effluent with domestic sewage in ratio of 1:3) (UPPCB Prescribed Standards) (RD 4)	CETP Outlet (RD 5)	CETP Discharge Standards (MoEF & CC Notified)		After Mixing of 130 MLD STP & CETP O/L at TEPH (RD 6)	Irrigation Canal (After mixing of all CETP & STPs) (RD 7)		
								Into inland surface water	On land for irrigation				
pH	-	7.46	6.5 - 9.0	7.4	7.6	6.5 - 9.0	7.68	8.1	6.0 - 9.0	6.0 - 9.0	-	8.57	5.5 - 9.0
TSS	mg/l	7701	600	411	1005	600	570	146	100	100	-	117	20
TDS	mg/l	10403	-	932	4964	-	4449	4464	-	-	2023	1795	-
FDS	mg/l	9619	-	771	4516	-	4080	4174	2100	2100	1822	1602	-
Chloride	mg/l	-	-	-	-	-	-	1990	1000	1000	-	627	-
Sulphide	mg/l	-	-	-	-	-	-	182	2	2	-	34	-
Total Phosphorus	mg/l	-	-	BDL*	-	-	-	-	-	-	-	BDL*	1
Total Nitrogen	mg/l	-	-	107.84	-	-	-	-	-	-	-	89.91	10
Oil & Grease	mg/l	-	-	-	-	-	-	8.8	10	10	-	13.8	-
COD	mg/l	-	-	321	1326	-	861	431	250	250	-	212	50
BOD	mg/l	-	-	104	492	-	310	194	30	100	-	76.4	10
Total Chromium	mg/l	132	10	3.6	16.8	4	-	8.4	2	2	-	6.6	-
Fecal Coliform	MPN/100 ml	-	-	-	-	-	-	-	-	-	-	4.5 x 10 <sup>2</sup>	230

\*BDL means < 0.5 mg/l.

*Sharma*

8. The tannery effluent coming from member units received at CETP inlet is not conforming to the prescribed norms of UPPCB w.r.t Total Chromium and TSS (T. Chromium- 132 mg/l against 10 mg/l, TSS- 7701 mg/l against 600 mg/l). This indicates that PETPs installed at the member tannery units are not adequate to achieve the prescribed norms of CETP inlet or not being operated properly.
9. It is important to note that Total Chromium has been detected in sample of domestic sewage inlet at CETP (T. Chromium- 3.6 mg/l) which indicates that the Chromium laden water/sludge is being discharged in domestic sewers at Jajmau, Kanpur.
10. CETP Inlet (after mixing of Tannery effluent with domestic sewage) is also not conforming to the prescribed norms of UPPCB w.r.t Total Chromium and TSS (T. Chromium- 16.8 mg/l, against 4 mg/l and TSS- 1005 mg/l against 600 mg/l).
11. As per analysis report, no significant reduction in TDS and FDS has been found after UASB treatment (TDS-4449 mg/l, FDS-4080 mg/l against 4964 mg/l and 4516 mg/l at mixing tank, respectively).
12. Outlet effluent of CETP is not complying with CETP Discharge Standards (MoEF & CC Notified) w.r.t TSS (146 mg/l against 100 mg/l), FDS (4174 mg/l against 2100 mg/l), Chloride (1990 mg/l against 1000 mg/l), Sulphide (182 mg/l against 2 mg/l), COD (431 mg/l against 250 mg/l), BOD (184 mg/l against 30 mg/l), and Total Chromium 8.4 mg/l (against Cr<sup>+3</sup>- 2 mg/l & Cr<sup>+6</sup>- 0.1 mg/l). This indicates that the complete treatment system at 36 MLD CETP Jajmau, Kanpur is not adequate to treat tannery effluent received with very high TSS and Total Chromium values.
13. After mixing of treated effluent of 130 MLD STP with treated effluent of 36 MLD CETP, FDS was found 1822 mg/l which is complying with CETP Discharge Standards (MoEF & CC Notified).
14. Treated effluent at Irrigation Canal (After mixing of CETP & all STPs) is not complying with CETP Discharge Standards (MoEF & CC Notified) w.r.t TSS (117 mg/l against 100 mg/l), Oil & Grease (13.8 mg/l against 10 mg/l), BOD (76.4 mg/l against 30 mg/l), and Total Chromium (6.6 mg/l against Cr<sup>+3</sup>- 2 mg/l & Cr<sup>+6</sup>- 0.1 mg/l).
15. Treated effluent at Irrigation Canal (After mixing of CETP & all STPs) is also not complying with STP Discharge Standards as per NGT Order w.r.t TSS (117 mg/l, 20 mg/l), Total nitrogen (89.91 mg/l, against 10 mg/l), COD (212 mg/l, against 50 mg/l), BOD (76.4 mg/l, against 10 mg/l), and Fecal coliforms (450 against 230).

#### 04. Conclusion:

1. The CETP is operational without any consent from UPPCB.
2. All inlet & outlet digital flowmeters installed at CETP were found defunct.
3. Tannery effluent received at CETP inlet was not conforming to the UPPCB prescribed norms w.r.t TSS and Total Chromium revealed that the PETPs installed at member units of tannery are not adequate/proper functioning.
4. The 36 MLD CETP at Jajmau, Kanpur is overloaded with tannery effluent at inlet of CETP w.r.t quality & quantity.
5. The treated effluent (before mixing with 130 MLD STP) is not complying with CETP Discharge Standards (MoEF & CC Notified) w.r.t. TSS, FDS, Chloride, Sulphide, COD, BOD, and Total Chromium however, is complying w.r.t. FDS after mixing with treated effluent of 130 MLD STP.
6. Treated effluent at Irrigation Canal (After mixing of treated effluents of CETP & all STPs) is also not complying w.r.t TSS, BOD, Sulphide, Oil & Grease and Total chromium of CETP notified discharge Standards of MoEF & CC.




7. Treated effluent at Irrigation Canal (After mixing of treated effluents of CETP & all STPs) is also not complying w.r.t TSS, Total Nitrogen, COD, BOD and Fecal coliforms of STP discharge standards as per NGT Order which revealed that the complete treatment systems at Jajmau, Kanpur needs immediate attention. Occurrence of Total Chromium in treated effluent being discharged for irrigation purpose is highly dangerous for animals and human using this water in nearby areas.
8. Significant presence of Total chromium in domestic sewage directly indicates that tannery units operated in Jajmau, Kanpur area are discharging chrome bearing effluent and sludge in domestic sewer line or unauthorised tanning activities are being done in the area.

**05. Name, Designation & Signature of Inspecting Officers:**

1. Dr. Vijya Singh, RA III, CPCB, RD, Lucknow
2. Dr. Ashutosh Tripathi, RA III, CPCB, RD, Lucknow
3. Sh. Prateek Srivastava, JRF, CPCB, RD, Lucknow

*Tripathi*  
9/7/21

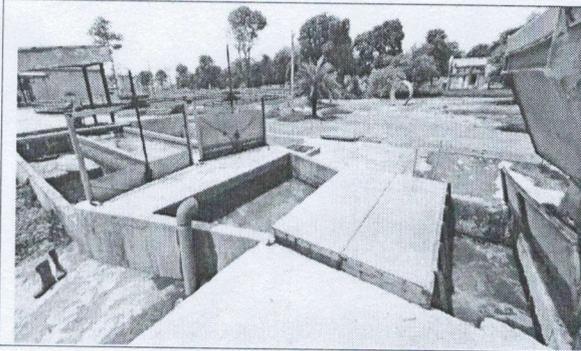
*Srivastava*  
09/07/21

**05. Recommendations:**

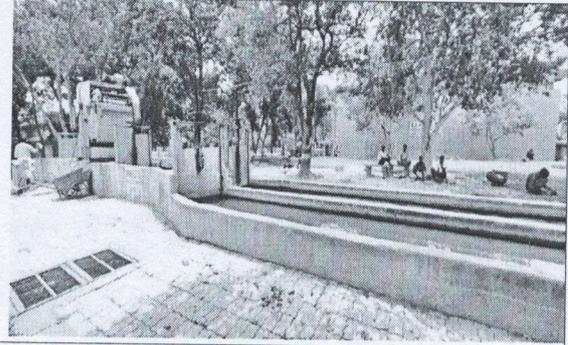
Based on observations of the inspection team, suitable direction may be issued to the member units of the CETP and CETP management.

*R.K. Singh*  
(R. K. Singh) 9/7/2021  
Regional Director

Photo Gallery



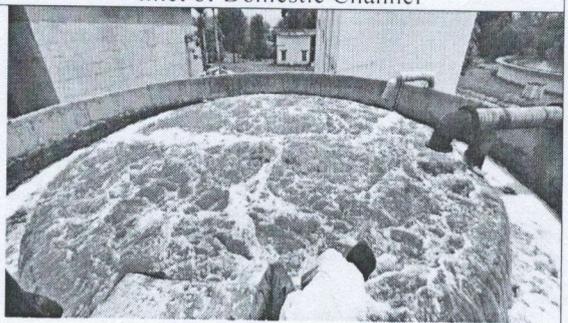
Inlet of Tannery Channel



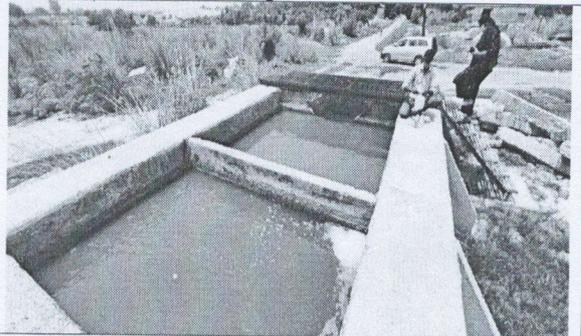
Inlet of Domestic Channel



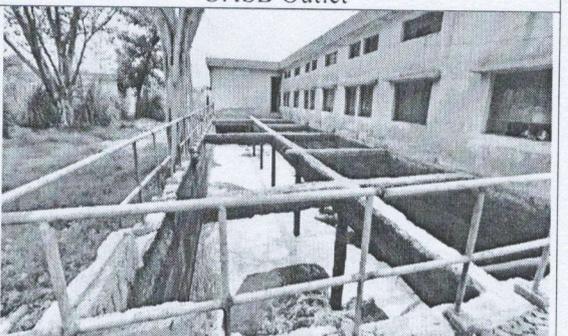
Mixing Chamber



UASB Outlet



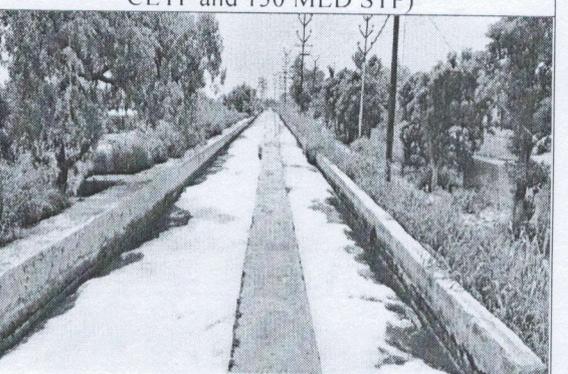
Final Outlet



TEPH (mixing of treated effluents of 36 MLD CETP and 130 MLD STP)



Mixing of treated effluents of all STPs in irrigation Canal



Irrigation Canal

A blue handwritten signature or mark, possibly a stylized 'S' or 'B'.

A blue handwritten signature that reads 'Niyath'.



सत्यमेव जयते

# केन्द्रीय प्रदूषण नियंत्रण बोर्ड

## Central Pollution Control Board

क्षेत्रीय निदेशालय, लखनऊ  
Regional Directorate, Lucknow

(पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार)  
(Ministry of Environment, Forest and Climate Change, Govt. of India)



आर. डी. एन./तक./एन. जी. आर. बी. ए./एस. टी. पी./2021-22/328/244

जुलाई 13, 2021

सेवा में,

सदस्य सचिव,  
केन्द्रीय प्रदूषण नियंत्रण बोर्ड,  
'परिवेश भवन', अर्जुन नगर (पूर्व)  
दिल्ली- 110032

ध्यानाकर्षण: प्रभाग प्रमुख, डब्ल्यू.क्यू.एम.- II प्रभाग

विषय: 01 सी.सी.आर.पी. निरीक्षण आख्या के संबन्ध में

संदर्भ: आर.डी.(एन.) कार्यालय आदेश सं. आर.डी.एन./टेक/ एन. जी. आर. बी. ए./ एस. टी. पी./ 2021-22/328/100-101, दिनांक 09.06.2021

महोदय,

उपरोक्त विषय के संदर्भ में क्षेत्रीय निदेशालय लखनऊ द्वारा एन.जी.आर.बी.ए. परियोजना के अंतर्गत 70 के.ल.डी., सी. सी.आर.पी, जाजमऊ, कानपुर का निरीक्षण कार्य दिनांक 17.06.2021 को किया गया।

निरीक्षण आख्या अवलोकनार्थ एव अग्रिम कार्यवाही हेतु सादर प्रस्तुत है।

भवदीय,

SA  
13/07/2021  
(आर. के. सिंह)  
क्षेत्रीय निदेशक

संलग्नक : यथोपरि

पिकप भवन, विभूति खण्ड, गोमती नगर, लखनऊ-226010 (उ.प्र.)  
PICUP Bhawan, Vibhuti Khand, Gomti Nagar,  
Lucknow-226010 (U.P.)  
EPABX दूरभाष : 0522-4087600, 4087700  
दूरभाष / Tel. : 0522-4087601, 2721915  
फैक्स / Fax : 0522-4087602  
ई मेल / e-mail : cpcb Lucknow@gmail.com

प्रधान कार्यालय/Head Office  
परिवेश भवन, ईस्ट अर्जुन नगर, दिल्ली-110032  
Parivesh Bhawan, East Arjun Nagar, Delhi-110032  
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फैक्स/Fax : 011-22307078, 22305793, 22304948  
ई मेल/e-mail : cpcb@nic.in  
वेबसाईट/website:http://www.cpcb.nic.in



**Central Pollution Control Board**  
**Regional Directorate, Lucknow**

**INSPECTION REPORT OF 70 KLD CCRP, JAJMAU, KANPUR, UTTAR PRADESH**

**1.0 Background:** In pursuance of Office Order No. RD-L/Tech/NGRBA/S.T.P./2021-22/328/100-101 dated 09.06.2021, 70 KLD CCRP at Wajidpur, Jajmau, Kanpur was visited on **17.06-2021** for compliance verification. The salient features and observation are as below:

**2.0 Salient features:**

1.	Name/Location of Plant	:	70 KLD CCRP, Wajidpur, Jajmau, Kanpur
2.	Coordinates (Latitude & Longitude)	:	26.41773, 80.42094
3.	Date of monitoring	:	17.06.2021
4.	Name of the Contact Person Contact details (Mob. E-mail)	:	Dr. R. K. Singh, Executive Engineer, Kanpur Nagar Nigam Mob:8601800828 Mr. Jitendra Kumar Pandey, Revenue Inspector (I/c), Kanpur Nagar Nigam Mob: 8528139130
5.	Year of commissioning	:	January 2007
6.	Operational/Non-operational (Reason if non-operational)	:	Operational
7.	Number of Member Units	:	117, Active units in last 6 months – 10-12 (as reported by CCRP Representative)
8.	Pre-treatment if any, details (Screen, Equalization Tank/pre-settling tank)	:	Screen & Equalization
9.	<b>Process of Chrome Recovery:</b> The exhausted Chrome tanned liquor collected from various tanneries and transported through mini tankers up to the Common Chrome Recovery Plant (CCRP) is fed at the Inlet of Screen provided at Storage Tank. The chrome liquor from Storage Tank goes to Equalization Tank by gravity for homogenization and then pumped to Coagulation Tank. In order to increase the pH of chrome liquor in between 8.0 to 8.5, Mg(OH) <sub>2</sub> slurry is also pumped to Coagulation Tank from Alkali Tank. From Coagulation Tank chrome liquor goes to Settling Tank for solid-liquid separation. The suspended solids (chrome hydroxide) get settled in hopper bottom and supernatant from Settling Tank is discharged through over flow weir for further treatment in CETP. Settled sludge is periodically withdrawn and collected in Sludge Collection Tank.		

	Sludge from Sludge Collection Tank is pumped to Centrifuge for de-watering up to required level and is discharged through gravity into Sludge Dissolution Tank in which concentrated Sulphuric Acid is pumped for proper dissolution of sludge. pH of Sludge dissolution tank is maintained in between 2.5 to 2.8 for regeneration of Cr <sub>2</sub> O <sub>3</sub> . Regenerated chrome is pumped to Regenerated Chrome Storage Tank from where it is to be given to tanneries for reuse.																																							
10.	Flow diagram of CCRP (to be attached)	:	Enclosed as <i>Annexure-I</i>																																					
11.	Designed Capacity (KLD)	:	70 KLD (2×35 KLD)																																					
12.	Utilized Capacity (KLD)	:	Varies from 1.451 KLD to 7.477 KLD (1-15 <sup>th</sup> June, 2021 (As per logbook).																																					
13.	Actual treatment (On the day of visit)	:	Flow meter not installed																																					
14.	If operating under designed capacity, give reason	:	--																																					
15.	Flow meter/v-notch at Inlet of CCRP & reading	:	Flowmeter/V-notch not available																																					
16.	Flow meter/v-notch at Outlet of CCRP & reading	:	Flowmeter/V-notch not available																																					
17.	Fresh water supply source (in CCRP premises) if any, details (source, water consumption status, logbook, meter)	:	Tube well, Flowmeter not installed																																					
18.	<p><b>Components of CCRP:</b></p> <table border="1"> <thead> <tr> <th>SL No.</th> <th>Name of Unit</th> <th>Nos.</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Storage Tank</td> <td>2</td> <td>35 m<sup>3</sup>each</td> </tr> <tr> <td>2.</td> <td>Equalization Tank</td> <td>2</td> <td>35 m<sup>3</sup>each</td> </tr> <tr> <td>3.</td> <td>Coagulation Tank</td> <td>2</td> <td>1.50 m<sup>3</sup>each</td> </tr> <tr> <td>4.</td> <td>Alkali Preparation Tank</td> <td>2</td> <td>4.0 m<sup>3</sup>each</td> </tr> <tr> <td>5.</td> <td>Settling Tank</td> <td>2</td> <td>8.0 m<sup>3</sup>each</td> </tr> <tr> <td>6.</td> <td>Sludge Collection Tank</td> <td>1</td> <td>6.4 m<sup>3</sup></td> </tr> <tr> <td>7.</td> <td>Sludge Dissolution Tank</td> <td>2</td> <td>2 m<sup>3</sup>each</td> </tr> <tr> <td>8.</td> <td>Acid Storage Tank</td> <td>2</td> <td>1000 Ltrs.</td> </tr> </tbody> </table>				SL No.	Name of Unit	Nos.	Capacity	1.	Storage Tank	2	35 m <sup>3</sup> each	2.	Equalization Tank	2	35 m <sup>3</sup> each	3.	Coagulation Tank	2	1.50 m <sup>3</sup> each	4.	Alkali Preparation Tank	2	4.0 m <sup>3</sup> each	5.	Settling Tank	2	8.0 m <sup>3</sup> each	6.	Sludge Collection Tank	1	6.4 m <sup>3</sup>	7.	Sludge Dissolution Tank	2	2 m <sup>3</sup> each	8.	Acid Storage Tank	2	1000 Ltrs.
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19.	<p>Raw effluent (CCRP inlet / equalization tank) and Treated Effluent (CCRP outlet) characteristics in terms of hexavalent chromium and Total chromium are given below:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Parameter</th> <th>Unit</th> <th>Inlet</th> <th>Outlet</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>pH</td> <td>-</td> <td>3.74</td> <td>7.86</td> </tr> <tr> <td>2.</td> <td>Chromium - VI</td> <td>mg/l</td> <td>BDL (i.e, &lt; 0.1)</td> <td>BDL (i.e, &lt; 0.1)</td> </tr> <tr> <td>3.</td> <td>Total Chromium</td> <td>mg/l</td> <td>1680</td> <td>0.32</td> </tr> </tbody> </table>				Sl. No.	Parameter	Unit	Inlet	Outlet	1.	pH	-	3.74	7.86	2.	Chromium - VI	mg/l	BDL (i.e, < 0.1)	BDL (i.e, < 0.1)	3.	Total Chromium	mg/l	1680	0.32																
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20.	Disposal of Effluent after Chrome Recovery	:	Sent to Inlet (Raw tannery effluent channel of 36 MLD CETP, Jajmau, Kanpur)
21.	Operation and maintenance of CCRP (Satisfactory/unsatisfactory)	:	Unsatisfactory
22.	Agency for operation and maintenance of CCRP	:	Nagar Nigam Kanpur
23.	Operation through Sub contractor, if any	:	No
24.	Power requirement	:	Record/information not available
25.	Status of power availability for uninterrupted and continuous running of CCRP	:	24 hrs/day
26.	Standby arrangement for power, if any	:	No
27.	Annual expenditure on O&M of CCRP	:	Rs 70,000 approx/month
28.	Consent from State Pollution Control Board/Pollution Control Committee or not	:	Consent not available
29.	Mode of raw effluent reaching to CCRP from tanneries	:	Through mini tankers
30.	Proposed augmentation or upgradation of capacity, if any	:	No
31.	Status of maintenance of log Books (inlet & outlet flow, pump operations, electricity, maintenance / breakdown maintenance)	:	Proper logbook not maintained
32.	Status of Skilled/trained Manpower (operation & laboratory)	:	A Revenue Inspector is I/c of the plant and one (01) operator
33.	Pictures: on page no 5 & 6		

### 3.0 Observations:

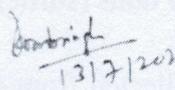
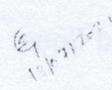
- (1) The CCRP is not having valid consent from UPPCB. Record of authorization for disposal of hazardous sludge was also not provided during visit.
- (2) The CCRP is operated by Kanpur Nagar Nigam and a representative was present at the site during visit.
- (3) It was informed that the chrome recovery system is operated intermittently depending on the receipt of chrome liquor from the tannery units (sufficient quantity of chrome liquor is ensured before running).
- (4) The exhausted chrome tanned liquor collected from various tanneries is transported through tankers to the CCRP.
- (5) On the day of inspection, The CCRP was operational, samples from the equalization tank and the treated effluent from settling tank were collected to quantify the chromium concentration.
- (6) Poor record keeping was observed during visit. The logbook was not maintained for treatment of chrome liquor.
- (7) The existing logbook at CCRP indicates that the plant is operated in the range of 2.07%-10.68% (depending on receipt of exhausted chrome tanned liquor) of its designed capacity of 70 KLD.

- (8) Receiving only 1.5 to 7.5KLD exhausted chrome liquor from member units revealed that most of the member units are not giving liquor to CCRP for chrome recovery. The domestic sewage channel at inlet of CETP 36 MLD is also receiving significant amount of Chromium. Therefore, possibility of discharging unrecovered chrome liquor/effluent to drains/R. Ganga cannot be ruled out.
- (9) Flow meters were not installed at the inlet/outlet of the CCRP to measure the untreated/treated volume of effluent.
- (10) The analysis result of the samples (Sl. No. 19, page no. 2) shows that hexavalent chromium is insignificant ( $< 0.1$  mg/l).

#### 4.0 Recommendations:

- (1) The CCRP management shall obtain valid consent from UPPCB.
- (2) Hazardous waste disposal authorization shall be obtained (if already available, a copy shall be made available).
- (3) Electromagnetic flow meters shall be installed at the inlet and outlet of the CCRP and a proper logbook shall be maintained. Proper logbook for raw chrome liquor received by member units shall also be maintained by the CCRP.
- (4) All records related to the CCRP shall be always made available at the plant for authorized representative of CPCB/SPCB.
- (5) Suitable operating officer with scientific/technical exposure in relevant field shall be deputed for operation/functioning of CCRP.
- (6) As reported, there are more than four hundred (400) tannery units operational in the area, however as reported, only 117 of them are members of the CCRP. Arrangement for expanding the membership to all chrome related units shall be made by Nagar Nigam Kanpur / UPPCB to optimally utilize the capacity of the CCRP.
- (7) In view of CCRP operating under capacity, UPPCB shall ensure that all the member units must supply 100 % of their exhausted chrome tanned liquor to the CCRP on the basis of consented capacity of each member unit. Sufficient volume of exhausted chrome tanned liquor will ensure continuous operation of the CCRP at optimum capacity.
- (8) UPPCB may ensure that chrome tanning units shall not be allowed to operate without being a member of the CCRP and delivering their exhausted (surplus in case of units having their individual chrome recovery plant) chrome liquor to the CCRP.

#### 5.0 Name, Designation & Signature of inspecting officers of RD (N), CPCB, Lucknow

- i. Er. Ram Balak Singh, Sci. 'C',  13/7/2021
- ii. Sh. Sumit Gangwar, JRF  13/7/2021

#### 6.0 Recommendations of RD Lucknow

Based on observations made by the inspection team, appropriate corrective action shall be taken by the CCRP management and suitable directions may be issued to the CCRP operating agency and/or UPPCB.

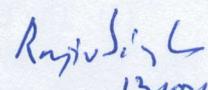
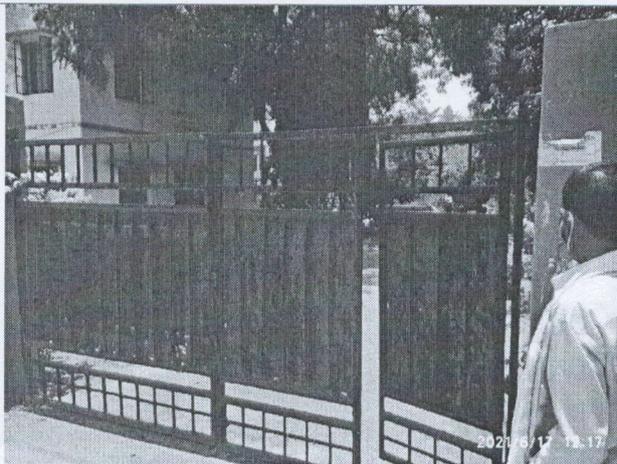
  
(R. K. Singh) 12/07/2021  
Regional Director  
Page 4 of 6

Photo Gallery of 70 KLD CCRP at Jajmau, Kanpur



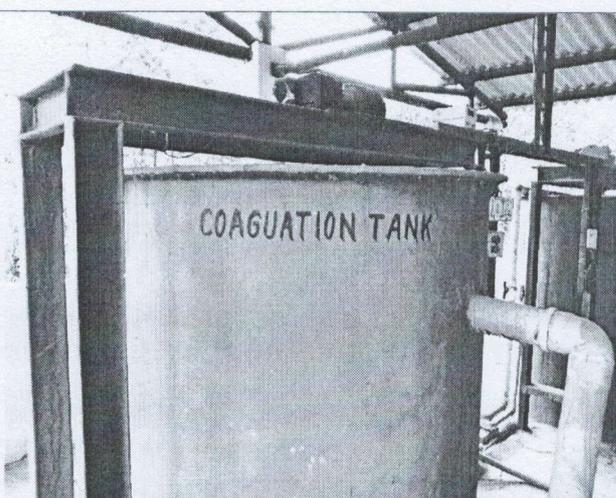
Pic. 1: Entry gate of CCRP



Pic. 2: Storage tank cum Collection/equalization tank



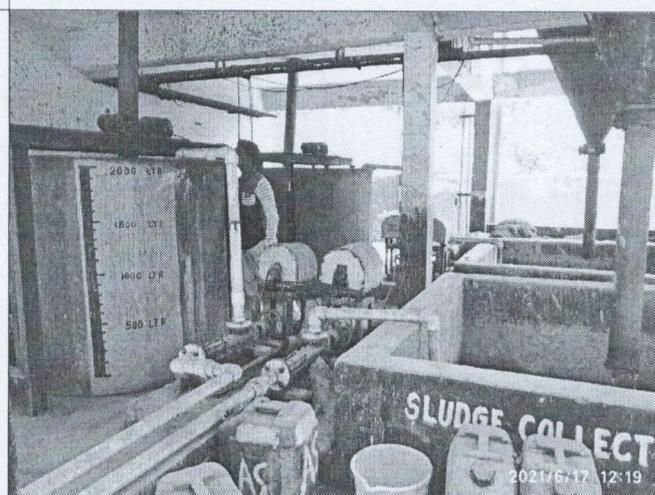
Pic. 3: Alkali Tanks



Pic. 4: Coagulation Tank



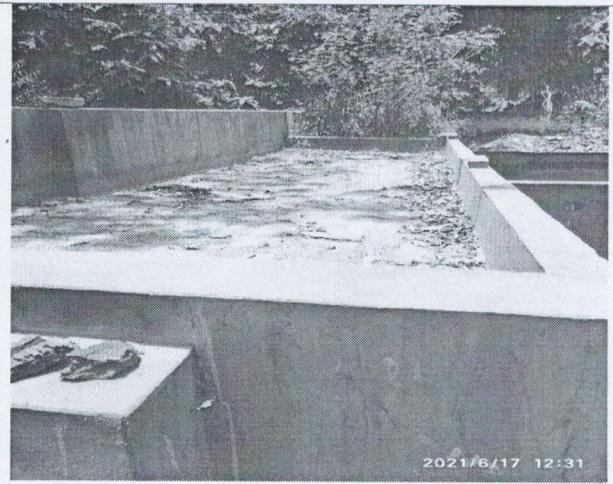
Pic. 5: Settling tank



Pic. 6: Sludge Dissolution Tank



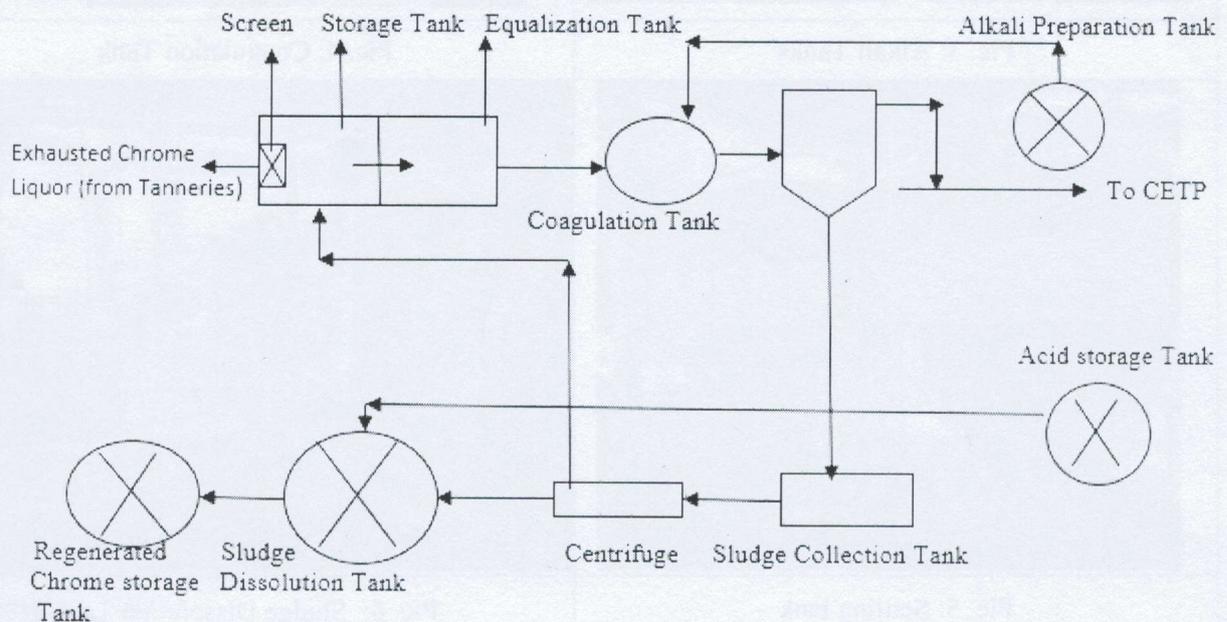
Pic. 7: CCRP



Pic. 8: Sludge Collection Tank/ Sludge Drying Bed

*Annexure-I*

**Process Flow Chart for Common Chrome Recovery Plant at Jajmau, Kanpur**





B-190188/CETP-Jajmau/PIAS/WQM-II/CPCB/2019-20/

23.7.2021

To,

Chairman,  
Uttar Pradesh Pollution Control Board,  
Building No. TC-12V, Vibhuti Khand,  
Gomti Nagar, Lucknow - 226 010

**DIRECTIONS UNDER SECTION 18 (1) (b) OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974 REGARDING NON-COMPLIANCE OF CETP, JAJMAU, KANPUR**

**WHEREAS**, the Central Pollution Control Board, has delegated powers vested under Section 18 (1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 to the Chairman, Central Pollution Control Board vide its resolution made in 133<sup>rd</sup> Board meeting item no. 3.12 dated 24<sup>th</sup> March, 2005 to issue directions under Section 18 (1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 to the State Pollution Control Board(s); and

**WHEREAS**, amongst others, under section 16 of the Water (Prevention and Control of Pollution) Act, 1974, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention and Control of Pollution) Act, 1974 is to coordinate activities of the State Pollution Control Boards & Pollution Control Committees to provide technical assistance and guidance to SPCBs / PCCs and to promote cleanliness of streams and wells in different areas of the States; and

**WHEREAS**, amongst others, under section 17 of the Water (Prevention and Control of Pollution) Act, 1974, one of the functions of the State Pollution Control Board (SPCB), constituted under the Water (Prevention & Control of Pollution) Act, 1974 is to plan a comprehensive programme for prevention, control or abatement of pollution of streams and wells located in the State and to secure the execution thereof; and

**WHEREAS**, under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974, no person shall, without the previous consent of the State Pollution Control Board establish or take steps to establish any industry, operation, or process or any treatment or disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land; and

**WHEREAS**, the Central Government has notified the standards for discharge of environmental pollutants from various categories of industries, Common Effluent

Treatment Plants (CETP) under the Environment (Protection) Act, 1986 and the rules framed there under; and

**WHEREAS**, CETP at Jajmau, Kanpur is based on UASB technology for treatment of 9 MLD tannery effluent after mixing with 27 MLD domestic sewage and thus having design capacity of 36 MLD. About 350 tanneries discharge their pre-treated effluent into the CETP, Jajmau through pumping stations located on three drains namely, Sheetla Bazaar, Wajidpur drain & Budhiya Ghat drain in Jajmau area; and

**WHEREAS**, CPCB issued directions dated 08.05.2019 under Section 18 (1) (b) of Water (Prevention and Control of Pollution) Act, 1974 to the Uttar Pradesh Pollution Control Board (UPPCB) for restoration of water quality of River Ganga in Kanpur and Unnao region and to comply with following directions:

- i. To ensure that no industry disposes untreated effluent and any effluent not meeting prescribed standards into any drain so that river Ganga does not receive any colored/ untreated effluent.
- ii. To regularly monitor compliance of industrial units and grant consent-to-operate to industries having requisite effluent treatment facilities and complying with prescribed standards and ensure that no industrial unit operates without valid consent-to-operate and industries operating without valid consent should be closed down forthwith.
- iii. To setup surveillance squads for tanneries and ensure that no illegal tanning activities are being carried out.
- iv. To impose Environmental Compensation on illegal tanning activities and submit weekly surveillance and action taken reports to CPCB.

**AND WHEREAS**, joint teams of CPCB and UPPCB officials carried out inspections of CETP, Jajmau on weekly basis during 19.03.2019-16.04.2019 and based on monitoring reports, the following observations were made:

1. Tannery effluent received is measured as 11 MLD- 19 MLD at CETP inlet which is more than the designed capacity of 9 MLD tannery effluent. 1:3 ratio of tannery effluent to sewage effluent is not being maintained causing enhanced toxic shock load on biological reactor resulting in reduced performance. It results in poor treatability of effluent.
2. High concentration of total Cr- in range of 2.38mg/l to 19.3mg/l, sulphides in range of 91.3mg/l to 165mg/l, TSS in the range of 74mg/l to 463 mg/l, in influent to CETP were observed, which cause hindrance to UASB operations resulting in poor performance. More than stipulated concentration of total Chromium and Sulphide in tannery effluent even after primary treatment and chrome recovery indicates improper functioning or non-performance of PETPs and Chrome recovery units of participating industries which results in to toxic shock to microbial species of biological reactor resulting into reduced efficiency.

3. More than allowed quantity of effluent generation indicates that participating tanneries are not adhering to UPCCB direction of operating on lower capacity.

**AND WHEREAS,** CPCB issued directions dated 13.05.2019 under Section 18 (1) (b) of Water (Prevention and Control of Pollution) Act, 1974 to the Uttar Pradesh Pollution Control Board (UPCCB) to comply with the following directions:

- i. All member tanneries connected to CETP Jajmau, Kanpur shall follow the PETP norms for discharge of primary treated effluent into the CETP.
- ii. CETP shall meet the desired effluent discharge standards at the outlet.
- iii. If CETP does not meet the prescribed effluent discharge standards at outlet, allowed production capacity of member tanneries shall be reduced to ensure that CETP outlet meets the prescribed discharge standards.
- iv. Member tanneries which do not meet PETP norms or follow directions regarding operations at reduced capacity shall be closed forthwith.

**AND WHEREAS,** CPCB vide letter dated 24.06.2019 asked UPCCB to submit the action taken report (ATR) with regard to the CPCB directions dated 13.05.2019; and

**WHEREAS,** CPCB issued directions dated 27.06.2019 under Section 18 (1) (b) of Water (Prevention and Control of Pollution) Act, 1974 to the Uttar Pradesh Pollution Control Board (UPCCB) to comply with following directions:

- i. To direct concerned authority to stop overflow of effluent in tapped drains and especially overflow from Wazidpur pumping station into Wazidpur drain.
- ii. UPCCB shall setup surveillance squads for tanneries and illegal industrial units and ensure that no illegal industrial activities are being carried out and submit weekly surveillance and action taken reports to CPCB.
- iii. UPCCB along with District Administration and Municipal Corporations shall conduct surveys to identify pollution sources and to close industrial units operating without valid consent and adequate effluent treatment system in Kanpur and Unnao regions.

**AND WHEREAS,** CPCB vide DO dated 08.08.2019 requested Chief Secretary, Government of Uttar Pradesh to ensure effective action against polluting activities and to advise concerned agencies including UPCCB to take effective action against polluting activities; and

**WHEREAS,** CPCB vide letter dated 30.08.2019 asked UPCCB to provide operational status of tanneries connected with CETP, Jajmau; and

**WHEREAS,** CPCB vide letter dated 20.09.2019 asked UPCCB that "Since, CETP is unable to function properly as sewage is not available as per the design requirements, the only course of action available is to close down CETP, Jajmau operations and the member

tanneries should be directed to set up their own full-fledged ETP or to close down their manufacturing operations, immediately.”; and

**WHEREAS**, in the meeting held on 04.11.2019 with the officials of NMCG and UPPCB, it was decided that compliance of treated effluent of CETPs (upcoming 20 MLD and existing 36 MLD) at Jajmau, shall be verified w.r.t. effluent discharge norms at CETP outlet for all parameters except for TDS (or FDS). The compliance of TDS (or FDS) shall be verified after dilution with treated sewage from STPs existing at Jajmau CETP complex before discharge; and

**WHEREAS**, CETP, Jajmau, Kanpur was inspected by a team of CPCB officials on 10.12.2019 and found non-complying w.r.t. to norms prescribed by UPPCB for inlet and outlet of CETP; and

**WHEREAS**, CPCB vide letter dated 17.02.2020 asked UPPCB to provide operational status of the tanneries connected to CETP, Jajmau; and

**WHEREAS**, CPCB issued directions dated 21.02.2020 under Section 18 (1) (b) of Water (Prevention and Control of Pollution) Act, 1974 to the Uttar Pradesh Pollution Control Board (UPPCB), to ensure implementation of pollution control measures, to stop excess discharge into drains and to ensure that untreated effluent should not be discharged into River Ganga; and

**WHEREAS**, the CETP, Jajmau, Kanpur was inspected by a team of CPCB officials on 24.02.2020 and found non-complying w.r.t. to norms prescribed by UPPCB for inlet and outlet of CETP and the Common Chrome Recovery Plant (CCRP), Jajmau being operated by Kanpur Nagar Nigam was found non-operational; and

**WHEREAS**, CPCB issued directions dated 19.03.2020 under Section 18 (1) (b) of Water (Prevention and Control of Pollution) Act, 1974 to the Uttar Pradesh Pollution Control Board (UPPCB), to comply with the following directions and to submit Action taken report:

- i. UPPCB shall arrange physical verification, closure, sealing and direct concerned authority for power disconnection of tannery units which are discharging untreated and more than permitted effluent into CETP inlet/ drains namely Sheetla Bazar drain, Wazidpur drain and Budhiya Ghat drain in Jajmau area.
- ii. UPPCB shall ensure that no industry discharges untreated effluent without meeting prescribed standards into any drain and untreated effluent should not reach river Ganga.
- iii. UPPCB shall expedite surveillance for tanneries and illegal industrial units to ensure that no illegal industrial activities are being carried out and submit weekly surveillance report.

**AND WHEARAS**, CETP and CCRP were inspected by a team of officials from CPCB on 10.11.2020 for compliance verification and performance evaluation. The following observations are made:

- i. CETP was found operational during inspection and operating at a utilized capacity of 33 MLD.
- ii. Flow meter at outlet was found defunct and V-notch was installed at inlet.
- iii. Treated effluent is mixed with treated domestic wastewater from 130 MLD STP & sent to irrigation channel which is used in irrigation & excess goes to river Ganga.
- iv. Treated effluent at outlet of CETP was found non-complying w.r.t. treated effluent discharge standards notified by MoEF&CC vide notification dated 01/01/2016 under E (P) Act, 1986 for **BOD (288 mg/l against norm-30 mg/l)**, **COD (632 mg/l against norm-250 mg/l)**, **TSS (262 mg/l against norm-100 mg/l)**, **Oil & Grease (20.4 mg/l against norm-10 mg/l)**, **Ammoniacal nitrogen (109 mg/l against norm-50 mg/l)**, **chloride (2759 mg/l against norm-1000 mg/l)**, **sulphide (222.6 against norm-2 mg/l)** and **total chromium (6.4 mg/l against norm-2.0 mg/l)**.
- v. PETP treated tannery effluent received at the inlet of tannery channel was not meeting the standards for CETP inlet (tannery channel) prescribed by UPPCB for **TSS (9290 mg/l against norm-600 mg/l)** and **total chromium (190 mg/l against norm-10 mg/l)**.
- vi. OCEMS was not installed at the outlet of the CETP however a defunct OCEMS was found at the Treated Effluent Pump House (TEPH) of the plant.
- vii. CETP has not provided details on status of Consent to Operate (CTO) obtained from UPPCB under Water Act.
- viii. The 70 KLD Common Chrome Recovery Plant (CCRP) Jajmau, operated by Kanpur Nagar Nigam was found non-operational.

**AND WHEARAS**, CPCB vide letter dated 14.01.2021 asked Kanpur Nagar Nigam to make CCRP, Jajmau operational to prevent direct discharge of chrome bearing effluent in to river Ganga; and

**WHEARAS**, CETP, Jajmau was inspected by the teams of officials from CPCB on 12.03.2021 for compliance verification and performance evaluation. The following observations are made:

- i. CETP was found operational during inspection and operating at a utilized capacity of 34.35 MLD.
- ii. CETP is operated by Uttar Pradesh Jal Nigam through an outsourced agency (M/s Ganga Infra Build Tech. Pvt. Ltd.).
- iii. CETP is connected 400-member tannery units.
- iv. V-notch was installed at inlet. Flow meter at outlet was found defunct.
- v. OCEMS was not installed at the outlet of the CETP.

- vi. Raw tannery effluent received at the tannery channel inlet was not meeting the standards for CETP prescribed by UPPCB for **TSS (3190 mg/l against norms of 600 mg/l)**.
- vii. Treated effluent at outlet of CETP was found non-complying w.r.t. treated effluent discharge standards notified by MoEF&CC vide notification dated 01/01/2016 under E (P) Act, 1986 and the Rules framed under for **BOD (160 mg/l against norm of 30 mg/l), COD (672 mg/l against norm of 250 mg/l), TSS (135 mg/l against norm of 100 mg/l) and sulphide (37.76 mg/l against norm of 2.0 mg/l)**.
- viii. Biogas holder at the plant was found defunct and the gas generated is flared.
- ix. The integrated premise has two bore-wells. One of the borewells is recently established and both the borewells neither have any metering system not permission/NOCs from CGWA.
- x. No information regarding quantity of sludge generated and disposed could be derived from the logbooks. Possession of Hazardous Waste Authorization, if any, document could also not be verified.
- xi. The following observations are made to 70 KLD Common Chrome Recovery Plant (CCRP) Jajmau:
  - a. On the day of inspection, CCRP was not running during the visit hours.
  - b. It was informed that the chrome recovery system is operated intermittently depending on the receipt of chrome liquor from the tannery units.
  - c. CCRP was not having a valid consent from UPPCB under Water (Prevention and Control of Pollution) Act, 1974.
  - d. Record of authorization for disposal of hazardous sludge was also not provided during inspection.
  - e. The logbooks were maintained crudely.
  - f. No flowmeter/v-notch has been installed at inlet/outlet of the CCRP to measure the untreated/treated volume of effluent.

**AND WHEARAS**, Hon'ble NGT vide order dated 08.02.2021 in O.A. 985/2019 stated that *"The report discussed above, only relates to scientific disposal of chromium dumps at three locations. Nothing is mentioned about the second issue of continued pollution by tanneries as well as discharge of untreated sewage into the irrigation canals and drains at and around Jajmau. Requisite remedial action may now be taken expeditiously and a report furnished alongwith the further action taken report on remediation of dump sites with compliance status as on 30.06.2021, by 15.07.2021", and*

**WHEREAS**, CETP, Jajmau and CCRP, Jajmau were inspected by the teams of officials from CPCB on 30.06.2021 and 17.06.2021, respectively for compliance verification and performance evaluation and following observations are made:

## **CETP, Jajmau**

- i. CETP was found operational during inspection and operating at a utilized capacity of 39.21 MLD.
- ii. The CETP was operating without valid consent.
- iii. Flow meters installed at inlet of tannery channel, outlet of CETP and TEPH were found defunct.
- iv. Raw tannery effluent received at the tannery channel inlet was not meeting the standards for CETP prescribed by UPPCB for **TSS (7701 mg/l against norms of 600 mg/l) and total Chromium (132 mg/l against 10 mg/l)**.
- v. Total Chromium-3.6 mg/l has been detected in domestic sewage inlet at CETP which indicated that illegal operations were being carried out in Jajmau, Kanpur and chrome bearing effluent and sludge was being discharged into the domestic drains by tannery units at Jajmau, Kanpur.
- vi. CETP inlet (tannery effluent + domestic sewage) was not meeting the standards prescribed by UPPCB for **TSS (1005 mg/l against norms of 600 mg/l) and total Chromium (16.8 mg/l against 4 mg/l)**.
- vii. Treated effluent at outlet of CETP was found non-complying w.r.t. treated effluent discharge standards notified by MoEF&CC vide notification dated 01/01/2016 under E (P) Act, 1986 and the Rules framed under for **BOD (194 mg/l against norm of 30 mg/l), COD (431 mg/l against norm of 250 mg/l), TSS (146 mg/l against norm of 100 mg/l), chloride (1990 mg/l against norm of 1000 mg/l) and sulphide (182 mg/l against norm of 2.0 mg/l) and Total Chromium (8.4 mg/l against norm of 2.0 mg/l)**.
- viii. After mixing of treated effluent of CETP with treated effluent of all three STPs (05 MLD, 130 MLD and 43 MLD), Fixed Dissolved Solids (FDS) were meeting CETP discharge standards notified by MoEF&CC vide notification dated 01/01/2016 under E (P) Act, 1986 (**FDS-1602 mg/l against 2100 mg/l**).

## **CCRP, Jajmau**

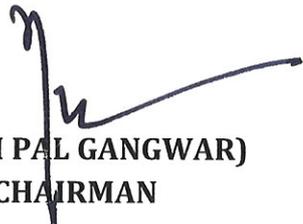
- i. The CCRP is operated by Kanpur Nagar Nigam. The exhausted chrome tanned liquor collected from various tanneries is transported through tankers to the CCRP and regenerated chrome is to be sold to tanneries for reuse.
- ii. CCRP was operational during inspection.
- iii. It was informed that the chrome recovery system is operated intermittently depending on the receipt of chrome liquor from the tannery units and sufficient quantity of chrome liquor is ensured before running.
- iv. Only 117 tanneries are member of CCRP.
- v. Analysis report indicated pH-3.74, Chromium (VI)- BDL and Total Chromium-1680 mg/l in raw effluent (CCRP inlet/Equalization tank) and pH-7.86, Chromium (VI)- BDL and Total Chromium-0.32 mg/l in treated effluent (CCRP outlet).

- vi. Only 1.5-7.5 MLD exhausted chrome liquor was collected from member tannery units during June 1-15, 2021 (as per logbook) indicates that member units are not giving liquor to CCRP for chrome recovery. The domestic sewage inlet channel was also receiving significant amount of Chromium therefore there is a possibility of discharge of chrome liquor/effluent into drains/river Ganga.
- vii. The treated effluent, after chrome recovery, was sent to Inlet of raw tannery effluent channel of 36 MLD CETP, Jajmau, Kanpur.
- viii. Flowmeter/v-notch has not been installed at inlet/outlet of the CCRP to measure the untreated/treated volume of effluent.
- ix. Poor record keeping was observed during inspection. Logbook for treatment of chrome liquor was not maintained.
- x. CCRP was not having a valid consent from UPPCB under Water (Prevention and Control of Pollution) Act, 1974. Record of authorization for disposal of hazardous sludge was also not provided during inspection.

**It is evident that Primary Effluent Treatment Plant (PETP) and Chrome segregation system installed by the member units are not adequate or not functioning properly to achieve desired PETP treated effluent quality norms or tanneries are discharging untreated effluent in to CETP, which effects the treatment efficiency of CETP. The presence of high concentration of Total Chromium in domestic sewage inlet to CETP indicates that excess wastewater generated from tanneries is also being discharged in to drains as untreated. CCRP is also functioning intermittently most of the time due to unavailability of Chrome liquor. It was observed that no flow meter installed at CCRP and no record of operations are maintained. CETP is also not operating properly and treated effluent of CETP is not meeting the desired discharge standards. Partially treated effluent discharged from CETP and untreated wastewater discharged from tanneries in to drains posing potential threat to surface water/ground water quality.**

**AND NOW THEREFORE**, in view of the above, and in exercise of powers delegated to the Chairman, Central Pollution Control Board under Section 18 (1) (b) of Water (Prevention & Control of Pollution) Act, 1974, you are hereby directed to take appropriate action against the **CETP, Jajmau and its member units and CCRP, Jajmau** which may include closure or levying Environmental Compensation as deemed fit following appropriate procedure.

UPPCB shall acknowledge receipt of these directions immediately and the action taken report shall be submitted to CPCB within 30 days.

  
(NARESH PAL GANGWAR)  
CHAIRMAN

**Copy to:**

1. **Director General,**  
National Mission for Clean Ganga (MoWR, RD & GR),  
1<sup>st</sup> Floor, Major Dhyan Chand National Stadium,  
India Gate, New Delhi - 110002 : For kind information  
and necessary action,  
please.
2. **Managing Director,**  
Uttar Pradesh Jal Nigam,  
6, Rana Pratap Marg,  
Lucknow - 226001 (U.P.) : For kind information  
and to ensure proper  
O&M of CETP.
3. **Municipal Commissioner,**  
Kanpur Municipal Corporation,  
(Kanpur Nagar Nigam),  
Moti Jheel, Kanpur - 208002 (U.P.) : For kind information  
and to ensure proper  
O&M of CCRP.
4. **Joint Secretary (CP Division),**  
Ministry of Environment Forests & Climate Change,  
Indira Paryavaran Bhawan, Jor Bagh Road,  
New Delhi - 110003 : For kind information,  
please.
5. **Regional Director (North),**  
Central Pollution Control Board  
PICUP Bhawan, Ground Floor, Vibhuti Khand,  
Gomti Nagar, Lucknow - 226010 : For kind information,  
please.
6. **District Magistrate,**  
Collector Mansion Road, Kanpur Nagar,  
Kanpur, Uttar Pradesh - 208001 : For kind information  
and necessary action,  
please.
7. **In-charge, IT Division, CPCB** : For uploading on CPCB  
website, please.

  
(PRASHANT GARGAVA)  
MEMBER SECRETARY

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