3rd Report of the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA No. 916 of 2018 in the matter of Sobha Singh & Others Vs State of Punjab & Others vide order dated 6.12.2019 uploaded on 12.12.2019

Report submitted to Hon'ble National Green Tribunal, New Delhi

31st January, 2020

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3rd report of Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh & Others Vs State of Punjab & Others in connection with order dated 06.12.2019 uploaded on 12.12.2019.

1.0 Submission of 2nd report of Monitoring Committee and its consideration by the Hon'ble Tribunal

The Monitoring Committee constituted by Hon'ble National Green Tribunal in O.A No. 916 of 2018 in the matter of Sobha Singh & Others V/s State of Punjab submitted its 2nd report dated 29/10/2019 vide letter no. CMC/SB/2019/95 dated 31/10/2019. The Hon'ble Tribunal considered the report of the Monitoring Committee on 6.12.2019 and passed the detail orders, which are enclosed as per **Annexure-1.** The Hon'ble Tribunal in its order dated 6.12.2019 uploaded on 12/12/2019 at Para no. 22 has clarified about the procedure for functioning of the committee as under:

Para no. 22:

> *"We consider it necessary to clarify the procedure for functioning of the Committee henceforth. The Committees may consider all relevant issues and give its reports preferably once in two months to this Tribunal with a copy to all the concerned Chief Secretaries and SPCBs/PCC. The concerned Chief Secretaries/SPCBs/PCC may look into the said report and give their response to this Tribunal within two weeks thereafter. The response may include the action taken by the statutory bodies or other authorities. Since the Committee constituted by this Tribunal is a Fact Finding/Executing/ Monitoring Committee and has to give status report to this Tribunal, its functioning may not be viewed as giving final directions to the regulatory bodies. However, the State regulatory body may take into account the observations of the Committee in their functioning and act their own after considering the response of the alleged polluter. The Committee will be at liberty to point out to this Tribunal that action taken by the regulatory authority was not adequate. These observations are consistent with the Orders of this Tribunal dated 21.10.2019 in O.A. No. 670 of 2018 with regard to the procedure and functioning of a similar Committee in the State of UP. Dr. Babu Ram will act as Technical Expert to the Committee henceforth."*

Further, the Hon'ble Tribunal in para no. 23 of the said orders has issued the following directions:

> *"Accordingly, following directions are issued: (i) Let the concerned authorities in the State of Punjab take steps in terms of observations and recommendations of the Committee particularly in the matter of setting up of requisite treatment plants in the State, compliance to standards by the existing STPs and fixing responsibility on officials for non-performance of duties, compliance to standards by CETP leather complex, inadequate inspections by officials of SPCB, slow pace with regard to 41 new/upgradation/rehabilitation of STPs, setting up of new CETPs textile and dyeing industrial cluster, setting up of new ETP for dairy waste, bridging of gap in terms of sewage quantity to be treated, interception of the drains, maintaining flow/release of fresh water in Buddha Nallah and Holy Bein, dealing of Buddha Nalla utilization of treated waste water, treatment facilities for villages, laying down pretreatment standards, de-silting of drains, shifting of dyeing industries, organizing health check ups, preventing direct discharges into the drains, increased surveillance of polluting industries, training of the staff. If the timelines laid down in the order of this Tribunal dated*

06.12.2019 in O.A. No. 673/2018 are crossed, compensation in terms of the directions in the said order will be payable. (ii) Local bodies in the catchment area may ensure that solid waste is not dumped into the rivers or the drains connected to the rivers. (iii) Future functioning of the Committee will be in terms of clarification as per para 22 above. (iv) Let the Chief Secretary, Punjab look into the matter as mentioned in Para 21 above and take further remedial action."

2.0. 3rd report of the Monitoring Committee in compliance of the directions in order dated 06.12.2019 uploaded on 12/12/2019 of Hon'ble Tribunal:

The monitoring committee held its meetings with the State Level Officers and District Level Officers of various districts of the State. It has also visited the industries and other pollution sources located in the catchment area of river Sutlej and Beas and made its recommendations which were sent to the concerned authorities to take further necessary action on the various activities to be carried out to control pollution in river Sutlej and Beas. The monitoring committee has also collected the data w.r.t. water quality of river Sutlej, Beas and tributaries of river Sutlej namely Budha Nallah, East Bein & Holy Bein, performance of existing sewage treatment plants, status of construction of new STPs, status of construction of STPs, where work has not been started so far due to financial non-availability and / or land issues, upgradation and enhancement of capacity of STPs, gap in sewage treatment, treatment of sewage / sullage from rural areas, utilization of treated sewage for irrigation and status of irrigation schemes as on 31/12/2019 to utilize the treated sewage for irrigation.

Therefore, based on the discussions held with the State Level Officers, district level officers in the various meetings held with these officers w.r.t. activities to be carried out to control pollution in river Sutlej and Beas, field visits, data collection on the activities as mentioned in aforesaid para, the monitoring committee has prepared its 3rd report and the same is mentioned as under:

2.1 Status report on various points as discussed in 7th meeting of the Monitoring Committee held with the State Level Officers on 30/10/2019:

2.1.1 Water quality of river Sutlej and Beas:

The status of water quality of polluted river stretches is under:

S.N.	River Stretch	Baseline (2018-19) water quality class	Target	Progress upto June, 2019	Progress upto September, 2019
1	Sutlej (Roopnagar to Harike Bridge)	C to E	B	B to D	B to D
2	Beas (along Mukerian)	C	B	C	C
3	Beas (Sultanpur Lodhi to confluence point to Beas)	C	B	B	B

The above data indicates that water quality of river Sutlej has been found improved from water quality class C to E to B to D in the stretch Roopnagar to Harike Bridge stretch of river Sutlej. Similarly, there is improvement in the water quality of river Beas from C to B considering baseline period 2018-19 and its comparison for the period of September, 2019.

2.1.2. Installation of real time water quality monitoring system:

It was apprised in the meeting that order for installation of 11 real time water quality monitoring station shall be placed by 15/11/2019 and system will be installed by 31/12/2019, but now PPCB has claimed that these system shall be placed by 31/3/2020.

2.1.3 Monitoring of functioning of STPs in the catchment area:

The Monitoring Committee was informed in the meeting that 48 STPs are being maintained by PWSSB and out of these 48 STPs, 45 STPs were monitored, out of which 7 STPs were found non compliant w.r.t. various parameters. 6 STPs which are being maintained by MC, Jalandhar have been found fully compliant as monitored during the month September, 2019. 100% STPs (5 no.) of capacity 466 MLD of Ludhiana have been found non compliant. 4 STPs, being maintained by Deptt. of Water Supply & Sanitation, were monitored and 2 STPs out of 3 STPs monitored during September, 2019 were found non compliant. Both the 2 STPs of BBMB of capacity 14 MLD have been found fully compliant.

The monitoring committee observed that percentage non compliance has been decreased during last 6 months from 46% in April, 2019 to 23% in September, 2019 and the reasons for the same have been mentioned as effective monitoring and improvement in the operating practices of STPs. With regard to de-silting of 4 STPs based on waste stabilization pond, the same shall be completed within 2 months.

Regarding rejuvenation of water quality of Budha Nallah, it was informed that comprehensive plan for installation of new STPs of capacity 200 MLD and upgradation of existing STPs of capacity 466 MLD has been prepared and the same shall be implemented by 31/12/2020.

2.1.4. Action against the non compliant STPs:

In September, 2019, 19 STPs were found non compliant and action against these STPs is under process.

2.1.5. Progress w.r.t. installation of OCEMS and CCTV cameras:

Presently, at 3 STPs of Jalandhar have been provided with OCEMS and CCTV cameras. In other STPs, these systems are yet to be provided. The monitoring committee directed that the concerned agency shall install OCEMS and CCTV cameras on all the STPs by 30/11/2019, failing which environmental compensation shall be imposed.

2.1.6. Monitoring of functioning of CETPs in the catchment area of river Sutlej:

The status of monitoring of CETPs is as under:

- Consistence non compliance of CETP Leather Complex was viewed seriously by the monitoring committee and PPCB informed that in compliance of the orders of Hon'ble Punjab and Haryana High Court, closure notices to all the leather tanning units of Leather Complex, Jalandhar have been issued u/s 33-A of the Water Act, 1974. PPCB was also directed to recover the environment compensation from the defaulting CETP management.
- With regard to functioning of CETP for small scale electroplating industries of Ludhiana, Jalandhar, Amritsar and Dera Bassi, it was informed in the meeting that wastewater collection at CETP is less as compared to the generation of wastewater by the member units. Therefore, there is need to carry out the audit w.r.t. generation of effluent by the electroplating industries, its lifting by CETP operator and treatment of effluent at CETP site.

2.1.7. Monitoring of functioning of ETPs of the industries:

The Chairman of the Monitoring Committee informed that the committee has visited 20 industries, out of which 14 industries have been found non compliant. Therefore, PPCB was directed to strengthen the regulatory mechanism to make the system effective. PPCB was also directed to pay special attention for the monitoring of industrial units located on Tajpur Road, Ludhiana and industries falling on the catchment area of Budha Nallah and Kala Singhian drain.

2.1.8. Setting up of new STPs / upgradation / rehabilitation of existing STPs:

The Monitoring Committee observed that 3 STPs in Jalandhar area, 3 STPs in Ludhiana and 68 other STPs are required to be installed to treat the sewage of various towns located in the catchment area of river Sutlej and Beas.

The Monitoring Committee recommended that all the remaining STPs for the towns located in the catchment area of river Sutlej and Beas may be completed by 31/12/2020.

2.1.9. Installation of new CETPs for dyeing industries of Ludhiana:

PPCB informed that the proposed CETPs of capacity 15 MLD, 50 MLD and 40 MLD are being set up at Ludhiana to treat the effluent of cluster of dyeing industries located at Bahadur Ke Road, Tajpur Road & Rahon Road and Focal Point, Ludhiana. These CETPs shall be completed by 30/11/2019, 31/3/2020 and 31/12/2019.

Regarding non starting of work of CETP of capacity 0.15 MLD to treat the electroplating effluent of Jalandhar, the monitoring committee directed PPCB to take up the matter with the District Administration, Jalandhar to get start the work and report be submitted accordingly.

2.1.10. Setting up of ETPs / Bio-gas plants for dairy waste:

- The monitoring committee was informed that there are 3 dairy complex existing in the catchment area of river Sutlej. Out of these 3 dairy complex, 2 dairy complex exist at Tajpur Road and Haibowal and 1 dairy complex exists at Jamsher, Jalandhar.
- Punjab Energy Development Agency (PEDA) claimed that bio-gas plant at Tajpur Road complex shall be set up within 30 months. A tri party agreement shall be signed between Municipal Corporation, Ludhiana, PEDA and Dairy owners. The monitoring committee directed Commissioner, Municipal Corporation, Ludhiana to make agreement within 1 month.
- Regarding management of cow dung at dairy complex, Haibowal, PEDA requested that directions may be issued to the dairy owners to send their animal dung to Haibowal dairy complex for its optimum utilization.
- For management of animal dung and liquid waste, Municipal Corporation, Jalandhar informed that the matter has been taken up with the PEDA to install bio-gas plant. For treatment of liquid waste, the matter shall be taken up separately with concerned agencies.

2.1.11. Setting up of treatment facility in villages:

Deptt. Of Rural Development and Panchayat informed that Rs. 50 crores has been received from the State Government for providing treatment facility by adopting Seechewal model in 127 villages of Phase-I. The construction work of these STPs shall be completed by 31/1/2020.

The monitoring committee asked Director, Rural Development and Panchayat to explore the technology developed by M/s Cownomics Pvt. Ltd. to rejuvenate the quality of water in the ponds.

2.1.12. Utilization of treated sewage of STPs for irrigation:

Deptt. of Soil & Water Conservation informed that the project for utilization of treated wastewater of 20 STPs has been approved by NABARD and administrative approval for the same will be received shortly.

The monitoring committee was of the view that there is urgent need to lay irrigation network to utilize treated sewage of Ludhiana area for irrigation so that it may not enter into Budha Nallah and subsequently into river Sutlej. The Deptt. of Irrigation informed that feasibility study for reuse of treated wastewater of Ludhiana city for irrigation purposes has been completed and report of the same will be completed to Deptt. of environment within a weeks time.

2.2. Recommendations made by the Monitoring Committee during its visit to sewage disposal points into Holy Bein and Kala Singhia drain (Sutluj catchment area) on 2/11/2019 and compliance report of Municipal Corporation Jalandhar:

The report on visit to sewage disposal points into Holy Bein and Kala Singhia drain alongwith recommendations of the monitoring committee were sent to Member Secretary, PPCB and Commissioner, MC, Jalandhar vide no. CMC/SB/2019/109-110 dated 5/11/2019 **(Annexure-2)** to take necessary action on the recommendations and submit the action taken report. The compliance report submitted by Municipal Corporation Jalandhar w.r.t these recommendations are mentioned as under:

Sr. no	Recommendations made by the Monitoring Committee	Compliance report
1.	PPCB shall issue directions under the provisions of Water (Prevention & Control of Pollution) Act, 1974 to the Manager, Gurudwara Ber Sahib and Other religious organizations that they shall not allow the discharge of any untreated/treated sewage/waste material into Holy Bein. The District Administration shall ensure that no such waste material is discharged into Bein in order to maintain the ecology and eco system of the Bein.	PPCB has issued necessary directions to the Manager, Gurudwara Ber Sahib, religious organizations and District Administration Kapurthala not to allow any waste material into holy bein to maintain its ecology and ecosystem.
2.	Municipal Corporation, Jalandhar shall ensure that no untreated sewage is discharged into Kala Singhian Drain. The pump set, installed at the manhole which was under repair, should be lifted immediately to rule out any possibility to discharge untreated sewage into the drain.	MC Jalandhar has lifted the pump situated on the manhole on the same day of the visit as the manhole was repaired.
3.	Municipal Corporation, Jalandhar shall make arrangements to lift Solid Waste lying dumped on both the banks of the Kala Singhian Drain. In the first phase, a stretch of drain starting from Kapurthala Road to the downstream of STP Peer Dad may be cleared by removing solids from both the banks of the drain by 30.11.2019.	Solid Waste on the banks of Kala Sanghian Drain will be cleared by 31.12.2019

4	The C & D waste lying dumped on the bank of the Kala Singhian Drain may be lifted by Municipal Corporation, Jalandhar by 30.11.2019.	C & D Waste on the banks of Kala Sanhgian Drain will be cleared by 31.12.2019
5	Municipal Corporation, Jalandhar shall shift the scattered dairies existing along Kala Singhian Drain to the suitable site within 03 months. In this regard, Punjab Pollution Control Board may issue necessary direction under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988 to the Municipal Corporation, Jalandhar.	B & R Branch and Health Branch of MC Jalandhar has been directed to initiate action for shifting all dairies to Jamsher dairy Complex.
6	Municipal Corporation, Jalandhar shall release O & M expenditure of the concessionaire for 50 MLD STP Peer Dad pending from the last one year and shall continue to pay O & M charges regularly to the operating agency so as ensure the regular operation of STP with full efficiency and effectiveness.	MC Jalandhar has released 35% of the pending amount and rest will be paid by 31.01.2020
7	Municipal Corporation, Jalandhar shall install new STP with additional capacity so as to treat the entire sewage reaching to Basti Peer Dad area by 31.03.2021 and the work of the same shall be allotted by 31.12.2019.	15 MLD Sewage Treatment Plant has been finalized by Local Govt. at Basti Peer Dad to cater the extra discharge of sewage and DPR of the same is being prepared. The tenders will be called by 31.01.2020
8.	Municipal Corporation, Jalandhar shall close both the outlets namely Guru Amar Dass Colony Disposal and Masqudan Sabzi Mandi Disposal by 15.12.2019 by providing two dedicated desilting Super Suction machines.	Guru Amar Dass Disposal and Sabji Mandi disposal have been plugged into sewer Line leading to STP Pholriwal. De-silting through super suction machine will be started after the approval of funds.
9	Punjab Pollution Control Board shall collect the data with regard to the O& M charges to be	Compliance is to be submitted by Punjab

	paid to the operating agencies of all STPs of Jalandhar. It shall verify upto which period the same has been paid any balance amount to be paid to the operating agency. Punjab Pollution Control Board shall issue necessary directions under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 to the Municipal Corporation, Jalandhar.	pollution Control Board. Report is awaited.
10	Punjab Pollution Control Board shall calculate the amount of Environment Compensation to be imposed on the Municipal Corporation, Jalandhar for the damages caused to the environment due to discharge of untreated sewage by pumping the wastewater from the manhole directly into the Kala Singhian Drain and non-operation of STP Peer Dad and the deterrent cost may be imposed on the Municipal Corporation, Jalandhar.	Compliance is to be submitted by Punjab pollution Control Board. Report is awaited.
11	Punjab Pollution Control Board shall ensure the connectivity of OCEMS installed on Effluent Treatment Plants of the industries and STPs of the Local Bodies with its server by 15.12.2019 so as to enable the Board to check online the quality of treated wastewater of STPs/ETPs.	Installation of OCEMs at ETP by the industries is to be ensured by PPCB. Regarding installation of OCEMs and CCTV at STP's by M.C Jalandhar, letter of intent (LOI) has been given to the contractor and the work order will be issued immediately after pre inspection of the material.
12	Punjab Pollution Control Board shall direct each agency operating and maintaining the STP to maintain record in the register showing the quantity of generation of sludge and mode of disposal alongwith proof of the same.	Compliance is to be submitted by Punjab pollution Control Board. Report is awaited.

2.3 Meeting with the District Level Officers and District Level Task force, Ludhiana by the monitoring committee on 15/11/2019:

The meeting was held with the District Level Officers and District Level Task force, Ludhiana by the monitoring committee regarding control of pollution in Budha Nallah and subsequently in river Sutlej on 15/11/2019. The recommendations made after detailed deliberation with the officers are mentioned as under:

Recommendations

1. The old STPs of capacity 152 MLD & 111 MLD shall be rehabilitated to meet with the prescribed standards by 31.03.2021 and the Municipal Corporation, Ludhiana shall submit PERT chart for the same by 30/11/2019.
2. The new STPs of capacity 255 MLD, including replacement of 48 MLD Jamalpur STP, presently lying defunct, based on new technology to meet with the latest prescribed standards, shall be completed by 31.03.2021 and Municipal Corporation, Ludhiana shall submit PERT chart for the same by 30/11/2019.
   The Chairman of the Monitoring Committee further directed that though 48 MLD STP Jamalpur is lying defunct but, it is being maintained by MC, Ludhiana. Therefore, adequate dosing of disinfectant may be imparted to reduce atleast the value of F.Coli parameter in the sewage before discharge into Budha Nallah.
   The description in brief of the projects costing Rs. 1000 crore covered under comprehensive plan, prepared by the Municipal Corporation, may also be submitted by the Municipal Corporation, Ludhiana within 3 weeks.
3. The outlets carrying untreated domestic sewage, directly falling into Budha Nallah, shall be closed after the commissioning of the new STPs i.e. by 31/3/2021. The Municipal Corporation, Ludhiana shall submit PERT chart for the same by 30/11/2019. The PERT chart may include the activities like preparation of project report, date of inviting tender, date of allotment of work and date of completion & commissioning of the project. The committee further directed that in case compliance is not made timely, environment compensation of suitable amount shall be imposed by PPCB.
4. OCEMS and CCTV cameras on all the 5 STPs of Ludhiana shall be installed and commissioned by 15.12.2019.
5. For the management of the animal dung of dairy complex Tajpur road and Haibowal, Ludhiana, biogas plant already installed at Haibowal shall be enhanced by PEDA by 31.03.2021. New bio-gas plant for management of animal dung of Tajpur Road shall be installed by 31/3/2021 by PEDA. Municipal Corporation, Ludhiana shall provide necessary funds to PEDA to ensure the installation of biogas plant within the time schedule.

For the treatment of liquid waste generated from dairy complex Tajpur Road and Haibowal, Municipal Corporation, Ludhiana shall ensure the installation of ETPs of capacity 5 MLD and 10 MLD for Tajpur Road and Haibowal Dairy Complex, respectively, by 31.03.2021.

The Municipal Corporation, Ludhiana shall also issue notice of 15 days to the dairy owners directing them to manage the animal dung in an environmentally sound manner.

As a short term measure, Officers of Municipal Corporation, Ludhiana and Senior Environmental Engineer, Zonal Office-II, Ludhiana shall jointly work out the modalities within 15 days to utilize the animal dung either of Tajpur Road or Haibowal dairy complex to manufacture briquettes at project sites and their utility in the industrial units.

6. The department of water resources shall ensure that the project regarding release of fresh water from Sirhind Canal into Budha Nallah may be completed by 31.12.2020 and a PERT chart in this regard be submitted to the committee by 30/11/2019.
7. Regarding utilization of treated wastewater of STPs of Ludhiana and CETPs of dyeing industries, Director/Chief Engineer, Department of Soil and Water Conservation and Chief Engineer, Deptt. of Water Resources may be called in the next meeting to get concrete proposal in this regard.
6. Regarding shifting of scattered dyeing industries, it was directed that PPCB shall also take up the matter with Managing Director, PSIEC to allocate suitable industrial plots, if available, in the Focal Point, Ludhiana so that these scattered industrial units may be easily shifted to the CETP compatible areas.
7. The River water quality monitoring stations (RWQMS) in river Sutlej, Beas and Budha Nallah shall be installed by PPCB by 31.12.2019.
8. PPCB shall monitor the water quality of Budha Nallah w.r.t. heavy metals also on monthly basis.
9. Regarding installation of CETPs for cluster of dyeing industries of Ludhiana, Deputy Commissioner, Ludhiana shall hold meeting with all the 03 SPVs of dyeing industries, Ludhiana in the presence of officers of PPCB, Municipal Corporation, Ludhiana and sort-out all the issues to ensure the timely completion of CETPs i.e. 15 MLD CETP by 31.12.2019, 40 MLD CETP by 31.12.2019 and 50 MLD CETP by 31.03.2020, failing which Environment Compensation as mentioned in point no. 10 (page 4) above, may be imposed by PPCB as per law.
10. PPCB shall maintain continuity to check the performance of effluent treatment plant of all the industries on surprise basis/random checking and action against the violating industries may be taken accordingly as per the provisions of the Water Act, 1974.

The minutes of the meeting were sent to all the concerned officers vide no. CMC/SB/ 2019/147-155 dated 19/11/2019 **(Annexure-3)** with the request to take necessary action on the recommendations given by the Chairman of the monitoring committee on the issues relating to their department and submit the action taken report within 21 days.

2.4. Visit to the industries of Ludhiana area on 15/11/2019 by the monitoring committee:

After the meeting with the District Level Officers and District Level Special Taskforce, the monitoring committee visited the industries of Ludhiana area on 15/11/2019 and the recommendations made in case of each industry are mentioned as under:

2.4.1 M/s Om processor Pvt. Ltd., K-3, Textile Colony, Industrial Area-A, Ludhiana.

Recommendations of the Monitoring Committee

Keeping in view the discussion on the analysis results and observations of the Monitoring Committee, the following recommendations are made:

Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 25 Lakh upon the industry. The said amount may be utilized rejuvenation of quality of river Sutlej water.
2. To revoke the consent granted to the industry under the provisions of Water Act, 1974.
3. The industry shall upgrade its effluent treatment plant to meet with the prescribed standards within 3 months
4. The production capacity of the industry may be reduced by 20% till the upgradation in the existing ETP is made by the industry and it achieves the standards prescribed by Punjab Pollution Control Board / MoEF&CC

2.4.2 M/s Oriental Knit Fab Pvt. Ltd., 278, Industrial Area-A, Ludhiana.

Recommendations of the Monitoring Committee

In view of the discussion on the analysis results and observation of the Monitoring Committee, the following recommendations are made:

The Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 25 Lakh upon the industry for misleading the Monitoring Committee for diluting treated wastewater system to bring the values of TDS and SAR within the permissible limits.

2. Chairman, PPCB shall constitute a special team to monitor the industry comprehensively w.r.t. composite sampling of untreated, pre-filtration sump well and treated effluent of the industry after every one hour and make it composite for 12 hours. The study may be carried out for 2 days. The effluent sample collected from each stream (untreated, pre-filtration sump and treated effluent) may be analyzed for all the parameters applicable to textile dyeing industry. The sludge generation after treatment of effluent may be quantified and it may be corroborated with concentration of influent parameters and amount of chemical used for treatment of effluent of the industry. The study may be conducted within 15 days and necessary action on the recommendations of the Special Team may be taken under the provisions of the Water Act 1974, under intimation to the Monitoring Committee.

2.4.3. M/s Sunshine Dyeing Pvt. Ltd., 261 Industrial Area-A, Ludhiana.

Recommendations of the Monitoring Committee

In view of the discussions on the analysis results and observations of the Monitoring Committee, the following recommendations are made:

Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 25 Lakh upon the industry for misleading the Monitoring Committee for diluting the untreated wastewater
2. Chairman, PPCB shall constitute a special team to monitor the industry comprehensively w.r.t. composite sampling of untreated, pre-filtration sump well and treated effluent of the industry after every one hour and make it composite for 12 hours. The study may be carried out for 2 days. The effluent sample collected from each stream (untreated, pre-filtration sump and treated effluent) may be analyzed for all the parameters applicable to textile dyeing industry. The sludge generation after treatment of effluent may be quantified and it may be corroborated with concentration of influent parameters and amount of chemical used for treatment of effluent of the industry. The study may be conducted within 15 days and necessary action on the recommendations of the Special Team may be taken under the provisions of the Water Act 1974, under intimation to the Monitoring Committee.

2.4.4. M/s Ramal Dyeing Jalandhar bye pass, Opp. Shakti Nagar, Ludhiana.

Recommendations of the Monitoring Committee

In view of the analysis results and observations of the Monitoring Committee, the following recommendations are made:

The Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 35 Lakh upon the industry. The said amount may be utilized rejuvenation of quality of river Sutlej water.
2. To revoke the consent granted to the industry under the provisions of Water Act, 1974.
3. The industry shall upgrade its effluent treatment plant to meet with the prescribed standards within 3 months
4. The production capacity of the industry may be reduced by 20% till the upgradation in the existing ETP is made by the industry and it achieves the standards prescribed by Punjab Pollution Control Board / MoEF&CC.

The report alongwith recommendations were sent to the Chairman, PPCB vide no. CMC/ SB/2019/227 dated 9/12/2019 **(Annexure-4)** with the request to take necessary action on the recommendations made by the monitoring committee in the case of each industry and action taken report be submitted within 15 days.

2.5 Visit to Dasuya, Talwara, Pathankot area and Sansarpur Terrace, Industrial Area, District Kangra by the Monitoring Committee constituted by Hon'ble NGT in OA no. 916/2018 in the matter of Sobha Singh Vs. State of Punjab and Others and OA no. 606/2018 in the matter of compliance of Solid Waste Management Rules, 2016 on 20.11.2019 and 21.11.2019.

The Monitoring Committee visited the pollution sources in Dasuya, Talwara and Pathankot area on 20.11.2019 and industries of Sansarpur Terrace, Industrial Area, District Kangra on 21.11.2019 and recommendations made in the case of each pollution source are mentioned as under:

2.5.1 Sewage Treatment Plant, Dasuya

The Monitoring Committee visited sewage treatment plant, Dasuya on 20.11.2019 and recommendations made are mentioned as under:

Recommendations

i) About 1 MLD untreated sewage is being discharged into drain, which is further taken temporarily into 2 ponds treatment system based on Seechewal Model by lifting the same from the drain. Monitoring

Committee recommends that the sewage network may be laid down in the unsewered area by 28.2.2020 so that untreated sewage may also taken into existing STP.

ii) Two outlets, maintained to discharge the treated sewage into drain, may be closed by 31/12/2019.

iii) Only one lifting pump has been provided to lift the effluent from the drain into 2 ponds treatment system. It was felt that there is need to provide one additional lifting pump as an alternative arrangement. The Monitoring Committee directed the Executive Officer, Municipal Council, Dasuya to purchase one additional pump by 31/12/2019.

iv) All the remaining ponds of existing STP, presently being filled with sludge, may be cleaned by 15/02/2020 and the sludge so generated must be handled and dispose of in an environmentally sound manner after getting it analysed for the parameters mentioned in schedule II of the Solid Waste Management Rules, 2016 and record of its disposal must be maintained.

v) No arrangements have been made to impart chlorination / disinfectant dosing to the treated effluent of STP. The Monitoring Committee directed the Executive Officer, Municipal Council, Dasuya to provide chlorination/ disinfectant dosing system within 4 months.

vi) The Chairman, PPCB shall depute a team to carry out comprehensive study of sewage treatment plant by collecting 4 hourly composite samples of untreated and treated sewage for 24 hours for 2 days. In the said comprehensive study, all the parameters of domestic wastewater including feacal coliform at the inlet and outlet of STP may be analysed. The team shall submit its report within 15 days to the Chairman, PPCB and he shall take appropriate action on the recommendations of the team as per law and under the provisions of the Water Act, 1974.

2.5.2 BBMB STP of capacity 8 MLD

The Monitoring Committee visited BBMB STP of capacity 8 MLD on 20.11.2019 and recommendations made are mentioned as under:

Recommendations

1 During visit, it was observed that small quantity of sludge was observed at the bottom of centrifuging system, which indicated that the BBMB does not operate its STP regularly. Monitoring Committee recommends that BBMB authority or operator of STP shall maintain daily record of MLSS and MLVSS in the aeration tank, amount of sludge withdrawn from the underflow of secondary clarifier to maintain required concentration of biomass in the aeration tank, amount of sludge after decanting into

centrifugal system and quantity of sludge lifted by the farmers or any other scientific disposal of the sludge. Daily record of parameters namely BOD, COD and TSS in the untreated and treated sewage may be maintained.

2 During visit, it was observed that the container placed at one corner of the chlorine contact tank was empty, which indicated that no chlorination to the sewage is being imparted to reduce the value of F.Coli parameter and to bring it within the norms. However, as per analysis results, the values of F. Coli at the inlet and outlet of STP were found as 17000 MPN/100ml and 820 MPN/100ml, respectively. However, it is not clear as to how the values of F. Coli has been reduced to 820 MPN/100ml from 17000 MPN/100ml without imparting any chlorine dosing in the system.

3. The Chairman, PPCB shall depute a team to carry out comprehensive study of sewage treatment plant by collecting 4 hourly composite samples of untreated and treated sewage for 24 hours for 2 days. In the said comprehensive study, all the parameters of domestic wastewater including feacal coliform at the inlet and outlet of STP may be analysed. The team shall submit its report within 15 days to the Chairman, PPCB and he shall take appropriate action on the recommendations of the team as per law and under the provisions of the Water Act, 1974.

4. The treated sewage of BBMB, Talwara may be utilized for gardening/plantation/irrigation purposes.

2.5.3 Management of Solid waste of BBMB, Talwara.

The Monitoring Committee visited BBMB, Talwara w.r.t Management of Solid waste on 20.11.2019 and recommendations made are mentioned as under:

Recommendations

i) M.C., Talwara shall arrange suitable piece of land for effective management of Solid Waste by 31.3.2020.

ii) Door to door collection of solid waste may be started by 31/12/2019.

iii) Segregation of the solid waste at source may be started by 31/12/2019.

iv) To convert the wet waste into compost, atleast five compost pits may be provided by 31/12/2019.

v) Dry waste should also be segregated to recover the material such as paper, wooden logs, plastic items, iron pieces etc. by providing atleast one material recovery facility by 31/1/2020.

vi) M.C. Talwara shall provide brick wall of appropriate height solid and green belt of appropriate width all around the Solid Waste dumping site as per the provisions of the MSW Rules, 2016 by 30.6.2020.

2.5.4 Installation of STP to treat sewage of Talwara Town:

The Monitoring Committee visited Talwara Town w.r.t installation of STP to treat sewage of the town and made the recommendations which are mentioned as under:

Recommendations

1. M.C., Talwara shall make request to Deputy Commissioner, Hoshiarpur and Director Local Govt. to facilitate the Municipal Council to provide suitable piece of land for STP. In the meanwhile, Monitoring Committee may also write a letter to the Principal Secretary, Department Local Government to take up the matter with BBMB authorities to provide suitable piece of land for installation of STP and management of solid waste of MC, Talwara.
2. M.C., Talwara shall prepare proposal and detailed project report (DPR) for installation of STP by 31/12/2019.
3. Funds for installation of STP shall be tied up by 28/2/2020.
4. Tender for installation of STP shall be floated by 31/3/2020.
5. STP shall be completed and commissioned by 31/3/2021.

2.5.5 Sewage treatment plant of capacity 27 MLD at Pathankot:

The Monitoring Committee visited 27 MLD STP at Pathankot on 20/11/2019 and made the following recommendations:

Recommendations

1. The Chairman of the Monitoring Committee directed that stabilization, commissioning and operational processes of all the components of sewage treatment plant shall be completed within one month, failing which an environment compensation @ Rs. 50,000/- per day shall be imposed for 15 days period and after these 15 days, if sewage treatment plant is still not commissioned, environmental compensation of Rs.1.00 lacs per day may be imposed on M.C., Pathankot and PWSSB on 50:50 basis.

2. Presently, about 20% of the untreated sewage of Pathankot city is being discharged without any treatment. The M.C., Pathankot shall lay sewerage network in the area which is without any sewerage system and it may be

routed to 27 MLD STP by 31/3/2020. However, in case due to non-feasibility, it is not possible to carry untreated sewage to said STP, Municipal Corporation shall construct new STP of adequate capacity by 31/12/2020.

3. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Amritsar shall check the operational status of 27 MLD STP at Pathankot on 25/12/2019 and collect the untreated and treated sewage samples of STP and submit its report alongwith the recommendations to Chairman, PPCB to take necessary action in the matter under intimation to the Monitoring Committee.

2.5.6 Visit to Friends Paper Mill, IGC, Pathankot

The Monitoring Committee visited Friends paper Mill, IGC, Pathankot on 20.11.2019 and the recommendation made are mentioned as under:

Recommendations

Though, the representative of the industry claimed that whole of the wastewater generated by the industry is recycled back into the process and no effluent is discharged, however, the Monitoring Committee was of the view that the industry may discharge its purge water after recycling the effluent number of times. As such, the Monitoring Committee recommended that Chairman PPCB shall depute a team headed by Senior Officer of the Board to monitor the industry comprehensively to ascertain as to whether the industry is actually achieving the Zero liquid discharge. The PPCB team shall check the water balance statement of the industry and waste material produced by it.

2.5.7 Visit to M/s Pioneer Industries Ltd., (Gluten Div.), Plot A2-A3, IGC, Defence Road, Pathankot:

The Monitoring Committee visited M/s Pioneer Industries Ltd., (Gluten Div.), Plot A2-A3, IGC, Defence Road, Pathankot on 20.11.2019 and the recommendation made are mentioned as under:

Recommendations

1. An environment compensation amounting to Rs. 20 Lakh may be imposed upon the industry. The said amount may be utilized for rejuvenation of the quality of the environment.
2. To revoke consent to operate under the provisions of the Water Act, 1974.
3. The industry shall rehabilitate the components of effluent treatment plant within 3 months so that it may achieve the standards w.r.t all the parameters at all the times.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

2.5.8 Visit to Sansarpur Terrace Industrial Area, Phase 3, District Kangra, Himachal Pradesh on 20.11.2019 and 21.11.2019.

During visit to 8 MLD capacity STP of BBMB Talwara on 20.11.2019, some persons of Talwara area met Monitoring Committee and it was informed that the industries located at Sansarpur Terrace Industrial Area ,Phase 3, District Kangra, Himachal Pradesh are discharging their wastewater into river Swan leading to river Beas.

Accordingly, the Chairman of the Monitoring Committee directed the Environmental Engineer, Regional Office, Hoshiarpur to visit the Sansarpur Terrace area immediately to check as to whether any industry of Sansarpur Terrace area discharges its wastewater into river Swan or not.

Accordingly, Environmental Engineer and Assistant Environmental Engineer, Regional Office, Hoshiarpur visited, the course of Swan River from the bridge on Swan River on the Kangra-Talwara road to its upstream side. During inspection it was noticed as under:

1. A significant quantity of expired/non-expired drugs were seen burnt there and some unburnt drugs were seen lying there which were found manufactured by M/s CMG Biotech Pvt. Ltd ., 58- Industrial Area, Phase 3, Sansanrpur Terrace and M/s Enrico Pharmaceuticals, 58- Industrial Area, Phase 3, Sansanrpur Terrace. The co-ordinates measured at this site were: 31°55'32" N and 75°54'39" E. Therefore, both these industries have violated the Bio Medical Waste Management Rules, 2016 intentionally & deliberately. Photographs showing the label on the packets of pharmaceutical tablets are mentioned as per **plates 1 and 2** given below:

Plate 1: Unburnt expired drugs showing the name CMG Biotech Pvt. Ltd

Plate 2: Burnt and unburnt bio medical waste lying in the bed of river Swan.

2. The team kept on walking along upstream side of river Swan and noticed that outfall of the sewerage system of Sansarpur Terrace area near the site mentioned in point no. 1, carrying wastewater which was finding its way into river Swan. Photograph taken during the visit is mentioned as per **Plate – 3** given below:

Plate 3: Wastewater being discharged through sewerage system of Industrial Area into river Swan

3. Thereafter, substantial quantity of discharge of wastewater was noticed on the backside of an industrial unit where the co-ordinates were measured as 31°55'30" N 75°55'23" E. The effluent sample of wastewater was collected and was sent to

PPCB Laboratory at Patiala for analysis. These results are given in the **Table** mentioned below:

Table: Analysis results of effluent samples

Sr.No.	Parameters	Results
1	pH	5.6
2	COD, mg/l	4200
3	BOD, mg/l	1630
4	TSS, mg/l	472
5	TDS, mg/l	789

Thereafter, the name of the unit was checked on its front side and the same was found to be written as M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area ,Phase 3, District Kangra, Himachal Pradesh on its main gate. The team did not visit the unit since it was located in the territory of Himachal Pradesh being not authorized to visit the unit in the territory of other State. The photographs showing the outlet of M/s Premier Alkobev Pvt Ltd, discharging wastewater in Swan river visit on 20.11.2019 are mentioned as per **Plate 4 and 5.**

Plate 4: Outlet on backside of M/s Premier Alkobev Pvt. Ltd., through which the wastewater was being discharged into river Swan

Plate 5: Photograph showing the team collecting sample of wastewater being discharged by M/s Premier Alkobev Pvt. Ltd on 20.11.2019 into river Swan

In the mean time the sunset started and the team had to conclude its visit. The entire facts, noted during visit on 20.11.2019, were informed telephonically to the Monitoring Committee and Senior Environmental Engineer, Zonal Office, Jalandhar.

Discussion on the analysis results

The analysis results indicate that the values of parameters were observed as pH: 5.6, COD: 4200 mg/l, BOD: 1630 mg/l, TSS: 472 mg/l, TDS: 789 mg/l which show that the industry namely M/s Premier Alkobev Pvt. Ltd, was discharging its untreated wastewater into river Swan and thus polluting the river Swan, leading to river Sutlej, thereby affecting the ecosystem

2.5.8.1 Visit to industries of Sansarpur Terrace, Industrial Area, District Kangra.

On 21.11.2019, the Officers of the Punjab Pollution Control Board and Himachal Pradesh Pollution Control Board accompanied the Monitoring Committee visited the Sansarpur Terrace Industrial Area.

During the visit, the Monitoring Committee visited the Swan river and Sansarpur Terrace Industrial Area and the following observations and directions were made

1. The Monitoring Committee alongwith officers of State Boards visited the site where the Bio Medical Waste belonging to M/s CMG Biotech Pvt. Ltd ., 58-Industrial Area, Phase 3, Sansarpur Terrace and M/s Enrico Pharmaceuticals, 58-Industrial Area, Phase 3, Sansarpur Terrace was lying burnt.

   The Monitoring Committee directed the officers of HPPCB to initiate action against both these industries for gross violation of the provisions

of the Bio Medical Waste Management Rules, 2016 framed under the Environment Protection Act, 1986.

2. A sample of wastewater from the outfall of the sewerage system of Sansarpur Terrace Industrial area through which the wastewater was being discharged into river Swan was collected by the officer of PPCB and HPPCB in the presence of Monitoring Committee and the officers of the State Boards (PPCB and HPPCB)

The said sample was sent to PPCB laboratory for analysis. The analysis results, as received from Punjab Pollution Control Board laboratory, are mentioned as per **Table** given below.

Table: Analysis results of effluent samples

S.no.	Point of sample collection	From the Katcha Channel leading from sewer of HPSIDC
1.	pH	6.57
2.	TDS, mg/l	380
3.	COD, mg/l	548
4.	BOD, mg/l	160
5.	TSS, mg/l	114
6.	Iron, mg/l	1.25
7.	Zinc, mg/l	BDL
8.	Total Chrome, mg/l	BDL
9.	Total Coliform, MPN/100 ml	1,70000
10.	Fecal Coliform, MPN/100 ml	94000

Discussion on the analysis results and observations

The analysis results indicate that the values of pH, TDS, COD, BOD, TSS, Iron, Zinc, Total Chrome, Total Coliform and Fecal Coliform were observed to be 6.57, 380 mg/l, 548 mg/l, 160 mg/l, 114 mg/l, 1.25 mg/l, BDL, BDL, 1,7000 MPN/100 ml and 94000 MPN/100ml, respectively.

The values of these parameters further indicate that through sewerage system of HPSIDC, sewage of Sansarpur Terrace industrial area is being discharged into swan drain and thus contaminating its water quality and subsequently affecting the aquatic life of river Beas. Based on the observations of the Monitoring Committee and analysis results of the effluent samples, the following recommendations were made:

Recommendations

The monitoring committee recommends that Chairman Himachal Pradesh Pollution Control Board shall initiate action as under.

i. To take legal action against the responsible officers of HPSIDC under the provisions of the Water Act, 1974 for discharging untreated wastewater of Sansarpur Terrace industrial area into river Swan.

ii. To impose an environment compensation amounting to Rs. 25 Lakh on department of HPSIDC for not providing adequate treatment facility to treat the domestic wastewater before its discharge.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

2.5.8.2 Visit to M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area, Phase 3, District Kangra, Himachal Pradesh

The Monitoring Committee alongwith officers of PPCB and HPPCB visited M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area, Phase 3, District Kangra, Himachal Pradesh on 21.11.2019 to check the status of treatment system and the outlet through which the wastewater is discharged into river Swan. After thorough inspection, the location of the pipeline was traced out by the visiting officers and the industry was asked to bring the JCB to dig out the pipeline through which the wastewater was discharged into river Swan. Initially, the industry dilly-delayed the matter on the one or the other pretext. However, the officers of the Punjab Pollution Control Board kept on pursuing the industry to bring the JCB for carrying out excavation to trace out the pipeline and to dismantle the same.

Thereafter, the industry brought the JCB and excavation was started and lastly after carrying out 7-8 feet deep excavation, an RCC pipeline of about 8 inch diameter was traced out, through which the wastewater was being discharged by the industry into river Swan. One length of pipeline of about 6' was dismantled and the opening in the wall was got plugged with cement concrete. The photographs showing the dismantled pipeline and plugging the opening in wall are mentioned as per **Plate 6 and Plate 7**.

Plate 6: Pipeline through which the wastewater was being discharged into river Swan, which was got dismantled with JCB

Plate 7: Plugging of outlet in the boundary wall of the industry

Based on the observation of the Monitoring Committee and analysis results of the effluent samples collected on 20.11.2019, the recommendations made by the Monitoring Committee are as under:

In view of the analysis results of the effluent samples collected on 20.11.2019, maintaining outlet to discharge the untreated streams into Swan river, misleading the Monitoring Committee by way of not detecting the underground pipeline laid to discharge its untreated effluent into rive Swan and subsequently in river Sutlej and affecting the quality of environment, the Monitoring Committee recommends as under:

Chairman HPPCB, shall initiate action to issue directions under the provisions of the Water Act, 1974 as under:

i. To impose the environment compensation amounting to Rs. 50 Lakh upon the industry. The said amount may be utilized for rejuvenation of the quality of the environment.
ii. To issue direction under the provisions of the Water Act, 1974 for its closure.
iii. The consent granted to the industry under the provisions of the Water Act, 1974 may be revoked.
iv. The industry shall upgrade its effluent treatment plant to treat all the waste streams within 3 months.
v. The industry shall discharge its treated effluent onto land for plantation and its shall not discharge any effluent into river Swan.
vi. The industry shall dispose off its rice husk ash in an environmentally sound manner and its shall not dispose off the same along the bank of river Swan.
vii. The industry shall improve housekeeping within its premises.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

2.5.8.3 M/s Jassal Paper Mill, industrial area, Sansarpur Terrace, District kangra (HP)

The local residents met the monitoring committee on 21.11.2019 and informed that the M/s Jassal Paper Mill, industrial area, Sansarpur Terrace, District kangra (HP) discharges its wastewater into natural drain flowing adjacent to the industry and the said drain leads to river Swan.

Visit to the industry

The Monitoring Committee visited the industry on 21.11.2019 in the presence of officers of Punjab Pollution Control Board and HPPCB and it was observed that the industry was not in operation. However, the committee observed that there was a big heap of rice husk ash on one side of the industry towards the natural drain. The heap of the rice husk ash in loose form was a big source of nuisance and may flow

into the natural drainage system. The photograph showing the heap of the rice husk ash is mentioned as per **Plate-10.**

Plate-10: Photograph showing the heap of the rice husk ash towards the natural drain

The Monitoring Committee directed that Chairman, Himachal Pradesh Pollution Control Board shall issue necessary directions under the provisions of the Air Act, 1981 to the industry as under:

1) To dispose off rice husk ash in an environmentally sound manner so that it may not cause any public nuisance and ash particles may not blow into the air.
2) To construct brick boundary wall of adequate height within 3 months towards the natural drain so that any rice husk ash or any effluent may not enter into the natural drain.
3) HPPCB shall submit the compliance report on the above said directions within 3½ months.

2.5.8.4 M/s Deepak battery storage, industrial area, Sansarpur Terrace, district Kangra

The local residents, who met the monitoring committee on 21.11.2019, have also made complaint that M/s Deepak battery storage, industrial area, Sansarpur Terrace, District Kangra also discharges its wastewater into natural drain adjoining to the industry. Accordingly, the monitoring committee directed Sh. S.S Matharu, Environment Engineer, Punjab Pollution Control Board to visit the industry and submit its report.

The industry was visited on its backside by Sh. S.S Matharu, Environmental Engineer, Punjab Pollution Control Board on 21.11.2019 and reported as under:

i. M/s Deepak Battery Storage, which is engaged in the business of manufacturing of lead acid batteries, was visited from its backside and wastewater was seen coming from its premises.

ii. The wastewater of the industry was being discharged into the natural drain through the katcha khala of agricultural fields

iii. The stagnation of wastewater was observed in the agricultural fields in a small stretch due to which the texture of the soil has been converted into sludge like properties. Photographs showing the discharge of wastewater through the katcha khala of agricultural fields, its stagnation in Katcha path and texture of soil of the fields are mentioned as per plates 11 to 13.

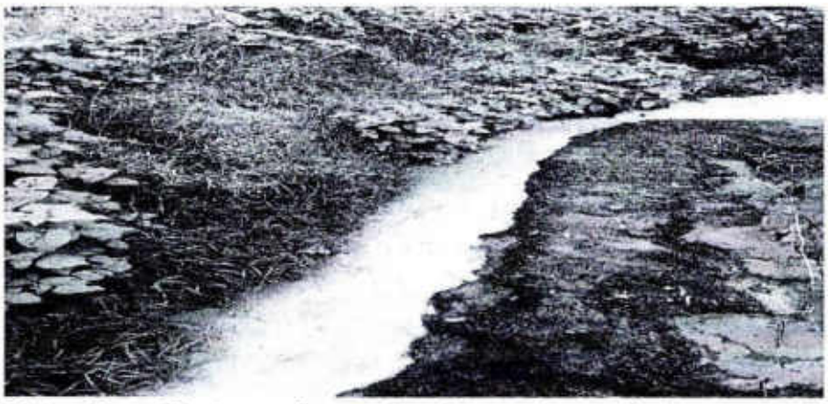

Plate 11: Photographs showing the discharge of wastewater through the katcha khala of agricultural fields.

Plate 12: Photographs showing the stagnation of wastewater in the katcha rasta

Plate 13: Photographs showing the condition of texture of the soil became like sludge in the agricultural fields due to discharge of wastewater of industry.

Collection of effluent samples

The officers of PPCB, collected the effluent samples of the wastewater and yellowish color sludge deposited in the kutcha khala to ascertain their characteristics and these samples were sent to PPCB, Laboratory Patiala for analysis. These analysis results are mentioned in **Table** given below.

Table: Analysis results of effluent samples

S.no.	Point of sample collection	From the katch channel existing on the backside of M/s Deepak battery storage, industrial area, Sansarpur Terrace, district Kangra.
1.	pH	4.2
2.	TDS, mg/l	950
3.	TSS, mg/l	40
4.	Iron, mg/l	127
5.	Lead, mg/l	BDL
6.	Total chrome, mg/l	0.37

Discussion on the analysis results, observations and recommendations

The analysis results indicate that the values of the parameters were observed as pH: 4.2, TDS: 950 mg/l, TSS: 40 mg/l, Iron: 127 mg/l, Lead: BDL, Total Chrome: 0.37 mg/l. The value of pH and Iron are beyond the permissible limits of 5.5 to 9.0 and 3 mg/l, respectively. Thus the industry is discharging acidic effluent with very high value of iron As 127 mg/l into kachha channel in the agriculture field and thus contaminating the soil of the agriculture field and degrading the environment.

Also, the analysis results of the soil sample collected from Katcha channel existing on the back side of industry on 21.11.2019 indicate the values of parameters Iron: 7781 mg/kg, T.Chrome: 3.926 mg/kg and Lead: 3.12 mg/kg were higher than the values of these parameters in normal soil as Iron: 142.2-313.5 mg/kg, T.Chrome: 4.123-6.774 mg/kg and Lead: 0.061-0.461 mg/kg (RUQIA NAZIR et al/J.Pharma. Sci. & Res. Vol. 7(3), 2015, 89-97).

In view of the above, the monitoring committee recommends as under:

Recommendations

Chairman HPBCB shall initiate action to issue directions under the provisions of the Water Act, 1974 as under:

i. The Chairman HPPCB shall impose environment compensation amounting to Rs. 10 Lakh upon the industry, the said amount may be utilized for improvement in the quality of environment.

ii. To revoke consent to operate under the provisions of the Water Act, 1974, if granted to the industry

iii. To direct the industry to install effluent treatment plant or upgrade its existing ETP to ensure the achievement of standards prescribed by MOEF/HPPCB. The treated effluent may be discharged on to land for plantation and shall not be used for agriculture fields.

iv. To reduce the production capacity of the industry appropriately till the ETP is installed or upgraded.

With regard to recommendations made by the Monitoring Committee in the case of the industry, as mentioned above, it is clarified that HPPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

The report on visit to the pollution sources of Dasuya, Talwara, Pathankot (Punjab) and Sansarpur Terrace (H.P) along with recommendations of the Monitoring committee were sent to the concerned officers of State of Punjab and Himachal Pradesh vide no. CMC/SB/2019/239-247 dated 23.12.2019 **(Annexure-5).**

2.6 Visit to the industries of Jalandhar area by the monitoring committee on 3/12/2019:

The Monitoring Committee visited the pollution sources in Jalandhar area on 3/12/2019 and the recommendations made w.r.t. each industry and pollution sources are mentioned as under:

2.6.1 Sewage Treatment plant (STP) of capacity 50 MLD, Basti Peer Daad, Jalandhar.

Recommendations/directions of the Monitoring Committee

1. Based on the discussion on the analysis results and observations of the monitoring committee, the following directions are given.
2. Chairman, Punjab Pollution Control Board shall initiate action to issue necessary direction under the provisions of the Water Act, 1974 as under:

   a) To impose an environment compensation amounting to Rs. 10.0 lacs and the said amount may be utilized for rejuvenation of water quality of river Sutlej.

   b) Chairman, PPCB shall depute a team of officers of Punjab Pollution Control Board to carry out water audit of the STP w.r.t. quantity and quality of

wastewater entering into STP, concentration of biomass in aeration tank, the amount of sludge generated from the STP, quantity of filtrate from the centrifuge system & its disposal, quantity & quality of treated wastewater at the final outlet and its method of disposal.

3. Chairman, PPCB shall direct the Municipal Corporation Jalandhar as under:
   i) To provide flow meter at the outlet of sewage treatment plant.
   ii) To maintain proper record w.r.t. generation of secondary sludge from STP, its storage & the quantity of sludge sent to the farmers and balance quantity of sludge available at site.
   iii) There should be no stagnation of any effluent or filtrate of centrifuge system within or outside the premises of the STP. The filtrate of the centrifuge system may be taken into collection tank or inlet chamber.
   iv) Not to throw any sludge inside or outside its premises.
4. Chairman, PPCB shall direct Municipal Corporation, Jalandhar to monitor the operation of STP by the responsible officer of Municipal Corporation, Jalandhar especially the quality of treated sewage and generation of sludge at least twice in a week.

2.6.2 Outlets falling into Kala Singhian Drain

Recommendations of the Monitoring Committee

After visiting the outlets along Kala Singhian Drain and flow of sewage to the said drain, the Monitoring Committee made the following recommendations:

Punjab Pollution Control Board, Municipal Corporation, Jalandhar, Deptt. of Water Sources and Department of Rural Development & Panchayat, shall carry out joint survey along Kala Singhian Drain and identify the various sources of effluent/sewage entering into Kala Singhian drain. The quantity of sewage/ effluent of each outlet, their analysis may be carried out so that the concerned department may be directed to close these outlets/discharges. Chief Environmental Engineer PPCB shall coordinate the issue and the survey should be completed within 21 days and report be submitted to the Committee.

2.6.3 Capitol Hospital, Pathankot Road, Jalandhar

Recommendations of the Monitoring Committee

In view of the analysis results and observations of the monitoring committee as mentioned above, the following recommendations are made by the monitoring committee:

Chairman, PPCB shall initiate action to issue directions to the hospital authorities under the provisions of the Water Act, 1974 as under:

i) To impose an environment compensation amounting to Rs. 20 lakh upon the hospital authority. The said amount may be utilized for rejuvenation of quality of environment.

ii) To revoke consent to operate under the provisions of the Water Act, 1974, in case, it has been granted to the hospital authorities.

iii) The hospital authorities shall upgrade its effluent treatment plant within 3 months so as to meet with the standards prescribed by PPCB / MOEF&CC. During the upgradation, sludge drying beds (SDBs) of adequate capacity may be provided as the present SDBs are not of sufficient size and capacity.

iv) The intake capacity of patients at indoor facility of the hospital should be reduced by 20% till the upgradation in the effluent treatment plant is made.

2.6.4 Shital Fibres Ltd., A-17, Focal Point, Jalandhar

Recommendations of the Monitoring Committee

In view of the analysis results and observations of the monitoring committee, the following recommendations are made:

Chairman, PPCB shall initiate action to issue following directions under the provisions of the Water Act, 1974 as under:

i) To impose an environment compensation amounting to Rs. 50 lakh upon the industry, which may be shared by its sister concern units in proportion to the effluent discharge of individual industry. The said amount may be utilized for rejuvenation of water quality of river Sutlej.

ii) To revoke consent to operate under the provisions of the Water Act, 1974 granted to the industry as well as its sister concern units.

iii) The industry shall upgrade its effluent treatment plant within 3 months to ensure to achieve the standards prescribed by PPCB/MOEF&CC.

iv) The production capacity of the industry and its sister concern units may be reduced by 20% till the achievement of the standards.

v) The industry shall install online effluent monitoring system (OCEMS) at the appropriate location at the outlet of effluent treatment plant in such a way that whole of the treated wastewater should pass through the system in which probe of OCEMS is inserted.

2.6.5 M/s H.R International unit-2, C-107-108, Focal Point Extn, Jalandhar.

Recommendations of the Monitoring Committee

Chairman, Punjab Pollution Control Board shall constitute a team under the Headship of Chief Environmental Engineer, Jalandhar to carry out comprehensive water Audit of the

industry w.r.t different processes involved to manufacture the products of the industry, quantity of effluent generated from different streams of different processes, treatment/recycling system to the streams other than electroplating process, quantity of effluent generated from electroplating process, capacity of storage tank, frequency of lifting of electroplating effluent by CETP operator, balance quantity of effluent in the storage tank after lifting its effluent, matching of all the above data and discrepancy, if any.

The team shall submit its detailed report along with its recommendations to Chairman PPCB before 15.1.2020. Chairman PPCB shall take action on the recommendations of the team as per provisions of the Water Act, 1974, within next 15 days after the receipt of the report of the team, under intimation to the Committee.

The report alongwith recommendations made by the monitoring committee in the case of each industry and pollution sources were sent to Chairman, PPCB vide letter no. CMC/2020/288 dated 6/1/2020 **(Annexure-6)** with the request to take necessary action on the recommendations made by the monitoring committee and action taken report be submitted to the monitoring committee within 15 days.

2.7 Report on compliance of order dated 17.12.2019 of the Hon'ble National Green Tribunal in OA no. 596 of 2019 in the matter of Vikram Ahuja V/s State of Punjab and others - Visit to the drainage system carrying seepage/ sludge and treated/ untreated sewage of the towns falling in the jurisdiction of District Fazilka, Ferozepur, Faridkot, Moga & Sri Mukatsar Sahib and further culminating at Fazilka area on 06.01.2020 and meeting with the District level officers of above 5 districts on 07.01.2020:

The Monitoring Committee visited Fazilka area on 06.01.2020 and 07.01.2020 w.r.t directions given by Hon'ble National Green Tribunal vide its order dated 17.12.2019 in OA no. 596 of 2019 in the matter of Vikram Ahuja V/s State of Punjab & others, which is reproduced as under:

We also request the monitoring committee headed by Justice Jasbir Singh to look into the matter.

Accordingly, the Monitoring Committee made field visits on 6.1.2020 and held meeting with District Level Officers on 7.1.2020 and the recommendations made by the Monitoring Committee are as under:

Recommendations

1. PPCB shall ensure that no industry is discharging its treated/ untreated industrial effluent into drain / nallah / river.

2. PPCB shall engage an expert to assess the water quality data of ground water and drains for its co relation with each others. The Sub Committee

constituted by the Deputy commissioner Fazilka shall submit its conclusive report within 2 months.

3. PPCB shall monitor the performance of existing STPs on monthly basis and action against the defaulting STPs may be taken under provisions of Water Act, 1974.

4. Department of Water Supply and Sewage Board shall install and commission STPs for the towns as under:

   - STPs for 3 towns namely Ferozpur, Jaito and Gidderbaha shall be installed by 31.3.2020.
   - 2 STPs for Kotkapura shall be installed by 31.7.2020
   - 2 STPs for Guruharsahai shall be installed by 31.8.2020.
   - 1 STP for Faridkot, where land acquisition process has been completed, shall be commissioned by 31.12.2020.
   - 5 STPs for 5 towns (Arniwal, Mallaanwala, Mudki, Mamdot and Nihal Singh Wala) for which funds are yet to be released shall be installed by 31.12.2020
   - 5 STPs for 4 towns (Badhni Kalan, Kot Ise Khan, Fatehgarh Panchtoor and Bariwala) for which funds are yet to be tied up, shall be completed by 31.12.2020

5. For the release of funds for the installation of STP's, where the funds have not been tied up so far, the concerned Deputy Commissioners shall take up the matter with State Govt.

6. The Municipal Council, Fazilka will construct a storage tank after WSP within 2 months from where treated wastewater will be lifted for supplying to farmers so that the settled sludge is not carried away with the treated effluent. PPCB will collect the effluent samples after 2 months in the presence of farmers and Municipal Council, Fazilka to check the adequacy of STP's.

7. As per the direction of the Hon'ble NGT, in-situ bio-remediation technology be adopted immediately where no sewerage system has been laid so far to have its connectivity with STP.

8. In order to reduce the inflow of the effluent in the pond, the department of water resources shall examine the issue with regard to closing of regulator installed at Sabuana drain so as to divert the effluent towards the creek leading to river Sutlej.

9. The Department of Water Resources in consultation with Deputy Commissioner, Fazilka shall maintain regular flow in Fazilka distributary and Kerian minor to ensure availability of water for irrigation for whole of the year till the completion and commissioning of STP's of all the towns of the Districts.

10. The Chief Agriculture Officer, Fazilka shall collect the data with regard to yield of crops in the affected area over the years and details of the villages from where the data was collected and submit the same to the Deputy Commissioner, Fazilka as well as to the Monitoring Committee.

11. Deputy Commissioner, Fazilka in coordination with concerned Municipal Councils and Punjab Water Supply Sewerage Board shall sort out the issues with regard to STPs of Shri Muktsar Sahib and Jalalabad towns.

12. The Principal Secretary, Department of Water Resources, Punjab, may take up the matter with the Ministry of Water Resources, Government of India, New Delhi to take up the matter with the concerned Ministry of Government of Pakistan through Ministry of External Affairs, Govt. of India to open the Fazilka drain, which is presently has been closed at the borderline of the countries, to make free flow in the river Sutlej so as to avoid stagnation and seepage in the Fazilka area. A provision in this regard was inserted in para (4) of Article-IV of "Indus Water Treaty, 1960 which reads as under:

Para (4) of article – IV of "the Indus Water Treaty, 1960 reads as under:-

"Pakistan shall maintain in good order its portions of the drainages mentioned below with capacities not less than the capacities as on the effective Date:-

i. Hudiara Drain
ii. Kasur Nala
iii. Salimshah Drain
iv. Fazilka Drain."

The report of the monitoring committee was sent to the officers of the concerned departments vide letter no. CMC/2020/316-320 Dated 20.1.2020 **(Annexure-7). However, separate report in compliance to the order dated 17.12.2019 of Hon'ble Tribunal in OA no. 596 of 2019 shall be submitted by the Monitoring Committee accordingly.**

2.8 The current status of performance of existing sewage treatment plants, construction of new sewage treatment plants, upgradation and capacity enhancement of existing sewage treatment plants, status of the towns where funds have not been tied up so far, gaps in quantity of sewage to be treated, utilization of treated sewage for irrigation, treatment of sewage of villages, water quality of drains / Nallahs/ rivers, environment flow, septage and feacal sludge management.

2.8.1 River Sutlej:

2.8.1.1 Major drains falling into river Sutlej

In river Sutlej, there are 30 major drains which fall directly into river Sutlej. The list of the drain is mentioned as under:

S.N	Name of the drain	Point of origin	Approximate length (in Km)	Location at which it meets river Sutlej
1	Adhera choe	Siswan dam	38.11	Village Beli Kalan, Shri Chamkaur Sahib
2	Hussainpur drain	Village Ladal and Hussainpura	3.04	Village Katli through Ropar wetland
3	Phool drain	Village Phool	3.06	Village Bara Phool
4	Budh ki Nadi	Himachal	36.58	Village Nanowal
5	Ladi Choe	Himachal Pradesh	3.04	Village Katli
6	Main seepage	Village Lodhipur	8.15	Through Nakia Khad near Gurudwara Patalpuri Sahib
7	Kiratpur Choe	From hills near Kiratpur Sahib	1.0	Through Nakia Khad near Gurudwara Patalpuri Sahib
8	Charan Ganga	From Nallah of Shri Anandpur Sahib	3.5	Near Village Lodhipur
9	M.C.M drain (lower)	Near Chamkaur Sahib	21.65	Mattewara Forest
10	Budha Nallah	Near Machiwara	40	Near Village Walipur
11	Jassowal Extension drain	Khadoor	1.07	Near Village Sherewal
12	Kishanpura outfall drain	Near Village Kamalki, Tehsil Dharamkot, Distt. Moga	28	Near Sutlej, Village Sherewal, Tehsil Dharamkot
13	Makhu drain	Near Village Nangal / Jogewala, Distt. Ferozepur	17.98	Near Village Dinne Ke, downstream of Harike headworks, Tehsil Zira, Distt. Ferozepur
14	Sukkar Nallah drain	Village Badhowal, Distt. Moga	99.10	Near Village Masteke, Tehsil & Distt. Ferozepur
15	Phidda drain	Near Village Burj Duna, Distt. Moga	68.29	Near Village Langiana close to international boundary, Tehsil & Distt. Ferozepur
16	Luthar Drain	Village Ludhar, Tehsil & Distt. Ferozepur	5.18	Near Village Waghe Wala
17	Mamdot drain	Village Changa Makhana, Tehsil & Distt. Ferozepur	11.89	Near Village Mamdo Hithar
18	Phidda outfall drain	Near Village Sehjadi, Tehsil & Distt. Ferozepur	52.59	Near Village Gajni Wala, Tehsil Guru Har Sahai, Distt. Ferozepur
19	Jiwan Arain drain	Village Mohan ke Uttar, Tehsil Guru Har Sahai, Distt. Ferozepur	12.95	Nera Village Issa Panj Frain, Tehsil Guru Har Sahai, Distt. Ferozepur
20	Jalalabad Mauzzam drain	Near Village Chak Janisar, Tehsil Jalalabad, Distt. Fazilka	19	This drain fall into creek of river Sutlej at Village Walle Shah Uttar/ Hasta Kalan, Tehsil & Distt. Fazilka
21	Salemshah drain	Near Village Theh, Qulander, Tehsil & Distt. Fazilka	11.7	This drain fall into creek of river Sutlej at Village Muhar Jamsher, Tehsil & Distt. Fazilka
22	Fazilka drain	Near to Fazilka town	5.3	Actual meeting point with Sutlej is

				in Pakistan territory 2 Km from international boundary near to Sulemanke headworks
23	Rahon Drain	Usmanpur to Kazampur Road	8.47	Near Village Saidpur Kalan
24	Balachaur Choe	South side of the road Balachaur to Ropar Road	7.1	Balachaur discharge into Balachaur choe and does not reach to river Sutlej
25	Lasara Kadiana	Village Pandrawal	10.67	Near Darbar Baba Jhandipir
26	Theing Drain	Village Theing, Phillaur	5.4	Near Crossing Dhusi Band at Phillaur
27	East Bein	Nawanshehar	214.62	Near Mandala Pind
28	Patti Nallah	Village Rampur, Distt. Gurdaspur	103.4	Village Kot Budha
29	Kasur Nallah	Village Tibbar, Distt. Gurdaspur	157.276	Village Kalas

2.8.1.2 Status of sewage treatment plants installed for the towns

The Status is as under:

Sr. No	Name of STP	Installed Capacity (MLD)
1	Goniana	3
2	Jalalabad (DWSS)	8
3	Abohar (AMRUT)	25
4	Makhu	4
5	Talwandi Bhai	4
6	Zira	8
7	Hoshiarpur	30
8	Jalandhar	100
9	Jalandhar (Pholriwal-I)	25
10	Jalandhar (Pir Dad)	50
11	Jalandhar	25
12	Jalandhar (Jaitewali)	25
13	Jalandhar (Bambianwali)	10
14	Nakodar	6
15	Phillaur (South)	2.6
16	Phillaur (South)	3
17	Phagwara (North)	20

18	Phagwara (South)	8
19	Phagwara (North)	8
20	Jagraon	16
21	Jagraon	12
22	Ludhiana (Balloke)	152
23	Ludhiana (Bhattian)	111
24	Ludhiana (Jamalpur)	48
25	Ludhiana (Bhattian)	50
26	Ludhiana (Balloke)	105
27	Machhiwara	4
28	Sahnewal	7
29	Moga	27
30	Dharamkot	4
31	Bagha Purana (DWSS)	3.8
32	Shri Mukatsar sahib (DWSS)	8.7
33	Shri Mukatsar sahib (DWSS)	5.7
34	Shri Mukatsar sahib (DWSS)	3.5
35	Malout	3
36	Malout	10
37	Banga	3
38	Nawanshahar	6
39	Morinda	5.5
40	Nangal	8
41	Nangal	5
42	Anandpur Sahib (DWSS)	8
43	Ropar	10
44	Ropar	2.5
45	Ropar	2
46	Kurali (GMADA)	5
47	Jaito (Completed & under testing)	6
48	Ferozepur(Completed & under testing)	18
49	East Jalndhar Cantt-I	3
50	East Jalndhar Cantt-	3

	II	
51	East Jalndhar Cantt- III	0.4
52	West Jalandhar Cantt- I	1.5
53	West Jalandhar Cantt- II	1.5
	Total	**1023.7**

2.8.1.3 Performance of Existing Sewage Treatment Plants

River Sutlej									
Sr.no	**Name of STP**	**Cap**	**Jan 2019 to June, 2019 (Average)**			**September to December 2019 (Average)**			
			Paramaters			**Parameters**			**Remarks**
			BOD (mg/l)	**TSS (mg/l)**	**F-Coli (MPN/ 100 ml)**	**BOD (mg/l)**	**TSS (mg/l)**	**F-Coli (MPN /100 ml)**	
1	Goniana	3	48	76	5950	39	49	1675	TSS within the norms. BOD and F.coli not within the norms except F.coli
2	Malout*	3	51	78	5350	65	89	26000	TSS within norms and BOD and F.coli not in norms.
3	Malout*	10	14	17	1008	18	34	950	Parameters within the norms
4	Muktsar	8.7	17	30	1270	157	216	96500	No improvement
5	Muktsar	5.7	73	108	20475	111	147	102500	No improvement
6	Muktsar	3.5	0	0	0	0	0	0	-
7	Abohar	25	11	13	703	8	10	660	Parameters within the norms
8	Dharamkot	4	9	11	703	11	11	750	Parameters within the norms
9	Makhu	4	10	12	695	13	13	750	Parameters within the norms
10	Moga	27	10	12	750	10	11	763	Parameters within the norms
11	Talwandi Bhai	4	9	11	770	12	13	728	Parameters within the norms
12	Zira	8	9	11	792	12	13	765	Parameters within the norms

13	Jalalabad	8	39	37	6604	61	95	5333	No improvement
14	Banga	3	11	16	630	10	18	668	Parameters within the norms
15	Hoshiarpur	30	34	53	22655	18	26	598	Parameters within the norms
16	Nawan Shahar	6	12	7	630	9	16	588	Parameters within the norms
17	Jalandhar	100	31	35	8967	25	32	3225	Parameters within the norms except F.coli
18	Jalandhar (Jaitewali)	25	11	4	568	10	17	585	Parameters within the norms
19	Jalandhar (Bambianwali)	10	12	17	365	8	16	703	Parameters within the norms
20	Jalandhar (Pholriwal, Gridhari Lal)	25	8	6	1533	10	13	800	Parameters within the norms
21	Jalandhar (Pholriwal-Eco Chem)	25	10	18	1732	11	12	800	Parameters within the norms
22	Jalandhar (Pir Dad)	50	21	50	3080	26	36	835	Parameters within the norms
23	Nakodar*	6	8	18	1390	12	21	863	Parameters within the norms
24	Phagwara (North)	20	36	37	6800	17	15	920	Parameters within the norms
25	Phagwara Hadibad	8	23	36	1480	14	25	715	Parameters within the norms
26	Phagwara Palahi Road	8	28	56	2220	18	15	3365	Parameters within the norms except F.coli
27	Phillaur	2.6	28	37	11167	32	54	3250	Parameters within the norms except F.coli
28	Phillaur (Tallan Road)	3	42	58	89023	9	16	918	Parameters within the norms
29	Machhiwara	4	9	16	690	14	20	4390	Parameters within the norms except F.coli
30	Sahnewal	7	12	25	1938	12	17	232	Parameters within the norms
31	Jagraon	16	13	26	1963	30	38	27083	Parameters within the norms except F.coli.

32	Jagraon	12	8	16	796	12	16	1113	Parameters within the norms except F.coli
33	Ludhiana (Balloke)	152	57	86	188750	54	58	146273	TSS within the norms but BOD and F.coli not within norms.
34	Ludhiana (Balloke)	105	40	58	11277	44	47	1251	TSS within the norms but BOD and F.coli not within the norms.
35	Ludhiana (Bhattian)	111	64	78	406550	61	131	53925	No improvement
36	Ludhiana (Bhattian)	50	20	19	4526	26	27	378	Parameters within the norms
37	Ludhiana (Jamalpur)	48	103	159	91200	132	153	61500	No improvement
38	Nangal	8	15	16	890	18	15	853	Parameters within the norms
39	Nangal*	6.7	11	14	782	14	24	950	Parameters within the norms
40	Badi haveli, Ropar	10	14	17	854	22	18	5863	F.coli parameter not within the norms
41	Anandpur Sahib	8	13	22	772	11	14	1230	F.coli parameter not within the norms
42	Kurali	**5**	11	14	876	19	10	3695	F.coli parameter not within the norms
43	Burari (Nangal)	5	11	13	612	8	10	650	Parameters within the norms
44	Sadabarat	2	11	14	733	8	12	690	Parameters within the norms
45	Rasoolpur (Ropar)	2.5	8	10	503	10	13	745	Parameters within the norms
46	East Jalndhar Cantt-I	3	-	-	-	43	57	970	TSS and F.coli within the norms and BOD not within the norms
47	East Jalndhar Cantt-II	3	-	-	-	42	56	930	TSS and F.coli within the norms and BOD not within the norms

48	East Jalndhar Cantt- III	0.4	-	-	-	-	-	-	-
49	West Jalandhar Cantt- I	1.5	-	-	-	40	62	1105	TSS within the norms. But BOD and F.coli are not within the norms
50	West Jalandhar Cantt- II	1.5	-	-	-	23	32	1287	BOD and TSS parameter within the norms. F.coli parameter not within the norms.

The above data indicate that out of 50 STPs, 26 STPs (52%) are complying with all the norms. In 10 STPs (20%) BOD and TSS parameters are within the norms but F.coli parameter not within the norms. 5 STPs (10%) meeting with TSS parameter but not meeting with the BOD and F.coli parameter. No improvement w.r.t BOD, TSS and F.coli parameter was observed in 5 STPs (10%). No data available in case of 2 STPs (4%). 2 STPs (4%) were found not meeting with BOD parameter alone.

2.8.1.4 Status of STPs under construction

5 STPs of capacity 26 MLD are under construction, the status of these STPs as on 31.12.2019 is as under:

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/commissioning	% work done	
				Earlier status as on 30/09/2019 (% work done)	Current status as on 31/12/ 2019 (% work done)
1.	Guru Har Sahai	4	31.12.2020	2 %	5 %
2.	Guru Har Sahai	1	31.12.2020	2 %	7 %
3.	Kotkapura	8	30.06.2020	75 %	80 %
4.	Kotkapura	6	30.06.2020	73 %	79 %
5.	Gidderbaha	7	31.01.2020	Completed. Electric connection under progress.	Completed. Electric connection under progress.
	Total	**26**			

2.8.1.5 Status of STPs under planning and funds tied up

For 12 STPs of capacity 353 MLD funds have been tied up and are under planning. The status of these STPs is mentioned as under:

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/commissioning	Earlier status as on 30/09/2019	Current status as on 31.12.2019
1.	Balachaur	4	31.10.2020	Tender called. To be opened on 23.10.2019	Tender re-called. To be opened on 23.01.2020
2.	Gharshankar	3	31.10.2020	Tender called. To be opened on 23.10.2019	Tender re-called. To be opened on 23.01.2020
3.	Maluka	1	31.10.2020	DNIT is being revised as per new eligibility criteria.	Revised DNIT under approval.
4.	Rahon	3	31.10.2020	Tender called. To be opened on 23.10.2019	Tender re-called. To be opened on 23.01.2020
5.	Faridkot	14	Land issue to be resolved	STP land – Price fixation done on 29.6.2019. Final approval of payment under approval. Land for approach road – Social Impact Assessment Study is being conducted.	For STP land- Price fixation has been done on dated 29.06.19 & Approval of LGM received on 30.12.2019. Land required for approach to STP- Compulsory Land acquisition being pursued by DC, Faridkot. Notification for SIA done by PSLG office on 29.08.19. Payment done for SIA. SIA started.
6.	Patti	8	Land issue to be resolved	Advertisement given on 9.7.2019. No application received. Advertisement process will be again initiated.	Land acquisition process started. Advertisement given in 2 Nos. newspapers by Executive Officer, Patti on 9/7/2019. No application received. Advertisement to be given again.
7.	Jalandhar	100	-	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.
8.	Ludhiana	200	-	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.	Tender called. To be opened on 23.01.2020
9.	Raikot	7	30.10.2020	Tender not received two times. Third time, corrigendum issued and now to be opened on 30.10.19	Tender called. To be opened on 22.01.2020
10.	Ferozepur	1	-	Land not available.	Land not available. Case for arrangement of funds for land has been sent by MC, Ferozepur to DLG.
11.	Sri Mukatsar Sahib	10	-	Funds tied up in AMRUT. DNIT approval under process.	Funds tied up in AMRUT. DNIT approval under process.
12.	Kiratpur Sahib	2	03.11.2021	DNIT under preparation.	Revised DNIT under approval.
	Total	353			

2.8.1.6 STPs under planning but funds yet to be tied up

The status of 10 STPs of capacity 28 MLD, which are under planning but the funds have not been tied up, is mentioned as under:

Sr. no.	Name of the town	STP Capacity (MLD)	Earlier status as on 30/09/2019	Current status as on 31.12.2019
1.	Bhagta Bhaika	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
2.	Bhai Roopa	4	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
3.	Kotha Guru	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
4.	Arniwala	2	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
5.	Mallan Wala	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
6.	Mamdot	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
7.	Mudki	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
8.	Mahilpur	2	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
9.	Nihal Singh Wala	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
10.	Barriwala	2	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Sewerage system does not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
	Total	28		

2.8.1.7 STPs which require technologically upgradation and funds tied up

Sr. no.	Name of the town	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date for completion/ commissioning	Earlier status as on 30/09/2019	Current status as on 31.12.2019
1.	Jalandhar (1 STP)	235	100	No target date given	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.
2.	Ludhiana (5 no. STPs)	466	466	30 months after allotment.	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.	Tender called. To be opened on 23.01.2020
	Total	701	566			

2.8.1.8 Gaps in treatment of sewage of the towns located on river Sutlej

Sr. No	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1.	Bhagta Bhaika	3	0	3
2.	Bhai Roopa	4	0	4
3.	Goniana	3	3	0
4.	Kotha Guru	3	0	3
5.	Maluka	1	0	1
6.	Faridkot	14	0	14
7.	Jaito	6	6	0
8.	Kotkapura	14	8 6	0
9.	Arniwala	2	0	2
10.	Jalalabad (DWSS)	8	8	0
11.	Abohar (AMRUT)	25	25	0
12.	Ferozepur	19	18	1
13.	Guru Harsahai	5	4 1	0
14.	Makhu	4	4	0
15.	Mallan Wala	3	0	3
16.	Mamdot	3	0	3

Sr. No	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
17.	Mudki	3	0	3
18.	Talwandi Bhai	4	4	0
19.	Zira	8	8	0
20.	Hoshiarpur	30	30	0
21.	Garhshankar	3	0	3
22.	Mahilpur	2	0	2
23.	Jalandhar	335	100 25 50 25 25 10	100
24.	Nakodar	6	6	0
25.	Phillaur (South)	5.6	2.6 3	0
26.	Phagwara	36	20 8 8	0
27.	Jagraon	28	16 12	0
28.	Ludhiana	666	152 111 48 50 105	200
29.	Machhiwara	4	4	0
30.	Raikot	7	0	7
31.	Sahnewal	7	7	0
32.	Moga	27	27	0
33.	Dharamkot	4	4	0
34.	Bagha Purana (DWSS)	3.8	3.8	0
35.	Nihal Singh wala	3	0	3
36.	Barriwala	2	0	2
37.	Gidderbaha	7	7	0
38.	Shri Mukatsar sahib	27.9	8.7 5.7 3.5	10
39.	Malout	13	3 10	0
40.	Balachaur	4		4
41.	Banga	3	3	0
42.	Nawanshahar	6	6	0
43.	Rahon	3	0	3

Sr. No	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
44.	Kiratpur Sahib	2.0	0.0	2
45.	Morinda	5.5	5.5	0
46.	Nangal	13.0	8.0 5.0	0
47.	Anandpur Sahib (DWSS)	8.0	8.0	0
48.	Ropar	14.5	10.0 2.5 2.0	0
49.	Kurali (GMADA)	5.0	5.0	0
50.	Patti	8	0	8
	Total	**1421.3**	**1040.30**	**381**

The above data indicate that out of 50 towns, there is gap of 381 MLD sewage quantity to be treated of 22 towns for which sewage treatment plants are required to be installed. The Department of local Government, GMADA, Department of Water Supply and Sanitation are required to take immediate steps to install STPs for treatment of gap in sewage.

2.8.1.9 Treatment of sewage of villages

The Department of Rural Development and Panchayat has claimed that for treatment of sewage of villages, 75 villages have been selected in first phase. The status of these STPs is as under:

Sr. No.	Name of District	Name of Block	Name of Village	Discharge in KLD	Estimated cost (in lakh)
1	Moga	Dharamkot at Kot ise Khan	Indergarh	395	40.00
2	Moga	Dharamkot at Kot ise Khan	Kot Sadar Khan	259	37.46
3	Moga	Moga-2	Wadda Ghar	259	39.98
4	Moga	Moga-2	Gill	237	39.72
5	Moga	Moga-2	Daulatpur Niwan	332	19.94
6	Moga	Moga-1	Bugipura	450	31.74
7	Moga	Moga-1	Mehna	449	19.66
8	Moga	Moga-1	Kokri Kalan	829	39.86
9	Moga	Moga-2	Daroli Bhai	601	34.44
10	Moga	Dharamkot at kot ise khan	Sere Wala	45	36.63

11	Moga	Moga-2	Chottian Khurd	62	19.61
12	Moga	Moga-2	Thamanwala	95	19.76
13	Moga	Dharamkot at kot ise khan	Attari	95	39.73
14	Moga	Nihal Singh wala	Patto Jawahar Singh	97	27.90
15	Ludhiana	Ludhiana-2	Harian	325	68.54
16	Ludhiana	Ludhiana-2	Sidhupur	400	38.47
17	Ludhiana	Machiwara	Behlolpur	262	6.20
18	Ludhiana	Sudhar	Hissowal	217	27.94
19	Ludhiana	Sudhar	Raqba	305	20.91
20	Ludhiana	Sudhar	Jassowal	219	27.94
21	Ludhiana	Sudhar	Aitiana	305	21.52
22	Ludhiana	Sudhar	Chownkimaan	382	36.56
23	Ludhiana	Sudhar	Sohain	262	29.30
24	Ludhiana	Sudhar	Hans Kalan	487	28.58
25	Ludhiana	Sudhar	Halwara	276	106.38
26	Ludhiana	Sidhwan bet	Gureh	321	24.57
27	Ludhiana	Ludhiana-2	Bhaman Khurd	73	26.14
28	Ludhiana	Ludhiana-2	Marewal	32	19.08
29	Ludhiana	Ludhiana-2	Rajgarh	63	4.16
30	Ludhiana	Ludhiana-2	Kot Gangurai	229	37.80
31	Ludhiana	Ludhiana-2	Koom Kalan	274	32.90
32	Ludhiana	Sidhwan Bet	Talwandi Khurd	233	6.60
33	Ludhiana	dhar	Jangpur	274	31.80
34	Ludhiana	Sidwan Bet	Talwandi Kalan	289	26.15
35	Ludhiana	Dehlon	Gopalpur	250	21.40
36	Ludhiana	Ludhiana-1	Baranhara	146	29.76
37	Ludhiana	Ludhiana-1	Talwara	106	29.78
38	Ludhiana	Sidhwan Bet	Kotmana	110	6.60
39	Ludhiana	Ludhiana-2	Panjeta	176	35.45
40	Ludhiana	Sidhwan Bet	Sadarpura	141	19.12
41	Ludhiana	Sudhar	Haran	282	32.10
42	Ludhiana	Ludhiana-2	Khasi Kalan	108	25.78
43	Ludhiana	Ludhiana-2	Bhaman Kalan	114	33.58
44	Ludhiana	Sidhwan Bet	Malsihan Bhaike	94	19.09

45	Ludhiana	Sidhwan Bet	Gorsian Kadar Bakash	62	6.60
46	Jalandhar	Jalandhar East	Haraza	120	—
47	Jalandhar	Adampur	Raowali	147	—
48	Ferozpur	Zira	Zira New	70	15.17
49	Ferozpur	Ghall Khurd	Piareana	97	21.05
50	Ferozpur	Momdot	Ali ke Jhughia	68	16.56
51	Ferozpur	Zira	Talwandi Mange Khan	356	29.18
52	Ferozpur	Zira	Talwandi Jalle Khan	260	29.25
53	Ferozpur	Zira	Sukhe Wala	324	29.92
54	Ferozpur	Zira	Alipur	228	29.71
55	Ferozpur	Zira	Mansoor Deva	267	29.92
56	Ferozpur	Mamdot	Basti Labh Singh	25	41.56
57	Ferozpur	Mamdot	Murak Wala	45	
58	Ferozpur	Mamdot	Shahed Jarnal Singh	70	50.90
59	Ferozpur	Mamdot	Har Gobindpura	31	
60	Ferozpur	Mamdot	Basti Jatta Singh	30	46.48
61	Ferozpur	Mamdot	Dona Matter Hattar	81	33.05
62	Ferozpur	Guruhar Sahai	Sekhra	44	30.4
63	Ferozpur	Guruhar Sahai	Haddi Wala	90	41.90
64	Ferozpur	Jalalabad	Bare Wala	35	21.76
65	Ferozpur	Jalalabad	Chhota Tiwana	36	8.24
66	Ferozpur	Jalalabad	Basti Mohar Singh Wala	41	8.20
67	Ferozpur	Jalalabad	Jafra Dibbi Pura	44	8.19
68	Ferozpur	Jalalabad	Kottu Wala	33	8.22
69	Ferozpur	Jalalabad	Sh. Udham Singh Nagar	37	8.21
70	Ferozpur	Jalalabad	Chak Bhabra	38	8.37
71	Ferozpur	Jalalabad	Chak Bhamba Wattu	37	18.69
72	Hoshiarpur	Hoshiarpur-1	Khalwana	53	16.16
73	Hoshiarpur	Mahilpur	Dihana	57	—
74	Ropar	Ropar	Rattanpura	90	—
75	Ropar	Anandpur Sahib	Brahmpur Lower & Bhandhleri	193	—

2.8.1.10 Details of the villages where STPs have been completed

Out of 75 villages selected in Phase I for treatment of sewage, STPs in 4 villages have been completed, the detail of which is mentioned as under:

Sr.No.	Name of District	Name of Block	Name of villages	Discahrge in KLD	Remarks
1.	Hoshiarpur	Mahilpur	Dihana	57	Completed
2	Ropar	Ropar	Rattanpura	90	Completed
3	Jalandhar	Jalandhar east	Hazara	120	Completed
4	Jalandhar	Adampur	Raowali	147	Completed

2.8.1.11 Status of 23 STPs/Towns where irrigation projects, for utilization of treated sewage for irrigation, have been commissioned (as on 31.12.219)

S. No.	Name of STP/Town	District	Capacity of STP (MLD)	Command Area (ha)	Date of Start of Project	Current status as on 31.12.19	Date of Completion
River Sutlej							
1	Phagwara-I	Kapurthala	28	550	01.03.2013	Completed	30.8.2017
2	Phagwara-II	Kapurthala			01.02.2019	Completed	30.8.2017
3	Phillaur-II	Jalandhar	3	105	01.04.2018	Completed	17.06.19
4	Nakodar	Jalandhar	6	180	1.11.2016	Completed	30.06.19
5	NikkuNangal (BBMB)	Rupnagar	8.5	120	19.10.2011	Completed	1.01.2016
6	NayaNangal (NFL)	Rupnagar	5	200	25.12.2011	Completed	01.01.2013
7	Sri Anandpur Sahib	Rupnagar	8.5	150	20.05.2010	Completed	01.07.2012
8	Haveli Kalan, Ropar-I	Rupnagar	10	100	20.08.2013	Completed	01.07.2015
9	Rasulpur, Ropar-II	Rupnagar	2.5	80	25.08.2013	Completed	01.02.2018
10	Sadabarat, Ropar-III	Rupnagar	2	72	28.08.2013	Completed	01.05.2016
11	Chamkaur Sahib	Rupnagar	1.7	99	03.06.2016	Completed	01.01.2017
12	Bucho	Bathinda	3	135	18.07.2015	Completed	13.02.2019
13	Goniana	Bathinda	3	102	25.05.2014	Completed	17.10.17
14	Kotfata	Bathinda	1.5	108	25.05.2014	Completed	30.10.2017
15	Maur	Bathinda	5	150	05.05.2015	Completed	22.02.2017
16	Dharamkot	Moga	4	45	25.11.2016	Completed	26.03.2018
17	Jalalabad	Fazilka	8	200	30.10.2015	Completed	31.08.2019
18	Fazilka	Fazilka	8	350	03.11.2014	Completed	08.01.2017
19	Muktsar Sahib-I (Balamgarh Road)	Muktsar	8.5	480	11.05.2016	Completed	15.06.19

20	Muktsar Sahib-II (Sardarwala)	Muktsar	7.5	185	15.10.2016	Completed	30.06.19
21	Malout-I (Bhagwanpura)	Muktsar	3	80	29.05.2016	Completed	31.1.2019
22	Machhiwada	Ludhiana	4	40	04.11.2016	Completed	28.06.2017
23	Kurali	Mohali	4	130	31.03.2013	Completed	01.07.2016

Out of 50 STPs, irrigation projects have been completed and commissioned for 23 STPs (46%). For the remaining STPs, irrigation schemes are required to be laid by the department of soil and water conservation.

2.8.1.12 Status of towns /STPs where irrigation projects for utilization of treated sewage for irrigation are under progress

S. No.	Name of STP/Town	District	Capacity of STP (MLD)	Command Area (ha)	Date of Start of Project	Current status as on 31.12.2019	Remarks
1	Begowal	Kapurthala	2.6	66	01.05.2019	Under progress	Irrigation project was functional since 2012, Extension of Pipeline being done

2.8.1.13 Status of towns/ STPs where irrigation projects for utilization of treated sewage for irrigation have been sactioned.

S. No.	Name of STP/Town	District	Capacity (MLD)	Command Area (ha)	Remarks
River Sutlej					
1	Mullanpur Dhakha	Ludhiana	3	111	Sanctioned under RIDF-25, Funds not released yet
2	BambianWali Cantt	Jalandhar	10	370	Sanctioned under RIDF-25, Funds not released yet
3	Jaitawali	Jalandhar	25	925	Sanctioned under RIDF-25, Funds not released yet
4	Phillaur-I	Jalandhar	3	135	Sanctioned under RIDF-25, Funds not released yet
5	Shahkot	Jalandhar	3	120	Sanctioned under RIDF-25, Funds not released yet
6	Hoshiarpur	Hoshiarpur	10	370	Sanctioned under RIDF-25, Funds not released yet
7	Jagraon-II	Ludhiana	16	592	Sanctioned under RIDF-25, Funds not released yet
8	Moga	Moga	27	999	Sanctioned under RIDF-25, Funds not released yet
9	BaghaPurana	Moga	4	148	Sanctioned under RIDF-25, Funds not released yet
10	Abohar	Fazilka	25	925	Sanctioned under RIDF-25, Funds not released yet
11	Malout-II	Muktsar	10	370	Sanctioned under RIDF-25, Funds not released yet
12	TalwandiBhai	Ferozepur	4	148	Sanctioned under RIDF-25, Funds not released yet

13	Zira	Ferozepur	8	296	Sanctioned under RIDF-25, Funds not released yet
14	Muktsar Sahib-III	Muktsar	3.5	129.5	Sanctioned under RIDF-25, Funds not released yet

The above data indicate that for 14 STPs, irrigation projects for utilization of treated sewage for irrigation have been sanctioned but the funds have not been released so far. The department of soil and water conservation shall take up the matter with department of Finance, Government of Punjab for early release of funds.

2.8.1.14 Status of towns /STPs where funds have not be tied up for irrigation projects (as on 31.12.2019)

S. No.	Name of STP/Town	District	Capacity (MLD)
River Sutlej			
1	Sahnewal	Ludhiana	7
2	Jagraon-I	Ludhiana	12
3	Makhu	Ferozepur	4
4	Nangal	Rupnagar	5
5	East JalndharCantt-I	Jalandhar	3
6	East JalndharCantt-II	Jalandhar	3
7	East JalndharCantt-III	Jalandhar	0.4
8	West Jalandhar Cantt-I	Jalandhar	1.5
9	West Jalandhar Cantt-II	Jalandhar	1.5
10	Phagwara-III	Kapurthala	8
11	Nawashahar	SBS Nagar	6
12	Banga	SBS Nagar	3
13	Balloke-II	Ludhiana	105
14	Pholriwal-II	Jalandhar	10
15	Pholriwal-III	Jalandhar	25
16	Basti Peer Dad	Jalandhar	50

The above data indicate that for 16 STPs, irrigation projects for utilization of treated sewage for irrigation have been prepared but the funds have not been tied so far. The department of soil and water conservation shall take up the matter with department of Finance, Government of Punjab for early release of funds.

2.8.1.15 Status of CETPs for treatment of effluent of dyeing industries of Ludhiana, leather complex, Jalandhar and effluent of electroplating industries of Jalandhar

Sr. no.	Project	Target date of completion	Progress upto June, 2019	Current status as on 20.01.2020
1	Setting up of 15 MLD CETP at Ludhiana	30.6.2019	80 %	100%
2	Setting up of 40 MLD CETP at Ludhiana	31.8.2019	62 %	93 %
3	Setting up of 50 MLD CETP at	31.1.2020	20 %	67 %

	Ludhiana			
4	Up-gradation up of 5 MLD CETP and setting up of 6 MLD at leather complex, Jalandhar	No time schedule mentioned	DPR under vetting with CLRI	-
5	Setting up of 0.15 MLD CETP for electroplating industries of Jalandhar	No time schedule mentioned	CETP work was started but due to public resistance, work has been stopped.	As per decisions taken by the Deputy commissioner, Jalandhar, work of CETP shall be started after obtaining necessary permission from the concerned department and with the help of Punjab police.

2.8.1.16 Identification of new CETPs to treat the effluent from focal points of the State.

- In order to treat the effluent generated from the electroplating / phosphating / surface coating units, common effluent treatment plant has been setup in phase – 8, Focal Point, Ludhiana & is lifting the effluent from the industries located in Focal Point, Ludhiana.

- An SPV has been formed under the name & style of M/s Amritsar Textile Effluent Treatment (P) Ltd., for the installation of CETP for dyeing industries of New Focal Point, Amritsar. The PSIEC has not handed over the plot for the construction of CETP. The matter is pending with the MD, PSIEC.

2.8.1.17 Installation of ETPs/Biogas power plant for treatment of dairy wastewater

Dairy complex, Jamsher, Jalandhar

In Jalandhar, 1 dairy Complex located at Jamsher dairy, generate about 5 MLD wastewater and cow dung. ETP of capacity 5 MLD has been proposed to be installed. A bio-gas power plant of 1 MW capacity has been proposed to be installed in the Jamsher dairy complex.

Dairy complex at Haibowal, Ludhiana

In this complex, about 10 MLD liquid effluent is generated. Also, about 400 TPD animal dung is generated, out of which 180 TPD is given to bio-gas power plant Haibowal. PEDA has already installed bio-gas power plant of capacity 1 MW. It was proposed by PEDA that power plant based on bio-gas shall be operated at capacity 0.5 MW and rest of the bio-gas to be generated using animal dung, shall be converted into CBG, which shall be sold in open market. Besides, liquid effluent about 10 MLD in the form of washings and urine of animal is directly discharged into Budha Nallah.

The State Government/ Municipal Corporation, Ludhiana has not taken any action to treat the wastewater containing high value of BOD and COD from dairy complex located at Haibowal, Ludhiana.

Dairy Complex, Tajpur Road, Ludhiana

In dairy complex, Tajpur road, about 5 MLD wastewater is generated in addition to generation of cow dung.

No steps have been taken to manage the cow dung and wastewater of diary complex, Tajpur Road, Ludhiana, which is big source of further degradation in quality of Budha Nallah effluent.

2.8.1.18 Desilting of Budha Nallah

The status is submitted as under:

Sr. no.	Activity to be carried out as per the recommendations of Monitoring Committee during its visit to Ludhiana on 1.5.2019	Action Taken report of department
1.	Department of water resources shall take immediate steps to desilt the Budha Nallah within city area within 2 months i.e. before monsoon	Report is yet to be submitted by the department of water resource.

2.8.1.19 Feasibility study for utilization of treated sewage of STPs of Jalandhar and Ludhiana towns for irrigation

The feasibility study for reuse of treated wastewater of STPs of Ludhiana (466 MLD) for irrigation was carried out by the Department of Soil and Water Conservation, Punjab and the same was submitted to Monitoring Committee vide letter no. 18951/Technical dated 03.12.2019. The status is as under:

S.No.	Name of STP/Town	District	Capacity (MLD)	Feasibility	Remarks
1	Pholriwal-I	Jalandhar	100	Not Feasible	Project not feasible as the farmers are reluctant to use treated wastewater
2	Jamalpur	Ludhiana	48	Not Feasible	The STP is lying defunct and PWSSB has planned a new STP based on SBR technology
3	Bhattian-I	Ludhiana	111	Not Feasible	Presently the quality of treated water is not fit for irrigation.
4	Bhattian-II	Ludhiana	50	Not Feasible	Presently the quality of treated water is not fit for irrigation.
5	Balloke-I	Ludhiana	152	Feasible provided the problem of brown colour and foul smell of water is addressed	Tentative estimate of Rs. 141.43 cr has been prepared for utilization of treated water. Funds need to be tied up.
6	Balloke-II	Ludhiana	105		

2.8.1.20 Comparison of water quality of river Sutlej at various points for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 w.r.t. parameters DO, BOD, TSS and F.Coli/T.Coli.

Part-A: With respect to parameters: DO, BOD and TSS

Sr.No.	Point of sample collection	DO mg/l		BOD mg/l		TSS mg/l	
		Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec
1	River Satluj, U/S Nangal	9.2	9.1	0.0	0.0	6	0
2	River Satluj D/S NFL	8.6	8.3	0.0	0.0	8	0
3	100m D/s PACL Nangal	8.5	8.4	0.0	0.0	8	5
4	River Satluj D/s Nangal	8.6	8.8	0.0	0.0	11	0
5	River Satluj at Kiratpur Sahib	8.3	8.5	0.0	0.0	12	9
6	Ropar Head-Works	8.4	8.7	0.0	0.0	11	12
7	River Satluj D/S of Rishab- Paper Mills	8.0	8.0	0.2	0.0	15	26
8	River Satluj U/S Buddha Nallah	7.5	7.9	1.4	1.1	20	41
9	Satluj at 100 mts D/s Budha Nallah confluence Ludhiana	2.7	3.6	51.5	14.0	64	104
10	Satluj at Boat Bridge, Dharamkot Nakodar Road	4.7	4.3	10.2	7.0	29	66
11	Satluj at D/s East Bein	5.7	5.1	3.6	5.6	22	54
12	Satluj at Harike	6.1	6.3	2.4	2.9	17	44
13	U/S Hussainiwala H/W Ferozepur	8.3	7.9	0.0	0.6	10	24
14	D/S Hussainiwala H/W Ferozepur	8.1	7.7	0.0	1.4	12	27

Part-B: With respect to parameters: T.Coli and F.coli .

Sr.No.	Point of sample collection	T.Coli MPN/100ml		F.Coli MPN/100ml	
		Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec
1	River Satluj, U/S Nangal	125	248	25	64
2	River Satluj D/S NFL	197	520	55	163
3	100m D/s PACL Nangal	205	575	58	190
4	River Satluj D/s Nangal	220	663	59	225
5	River Satluj at Kiratpur Sahib	748	633	230	195
6	Ropar Head-Works	1088	1120	292	420
7	River Satluj D/S of Rishab- Paper Mills	1178	1498	387	510
8	River Satluj U/S Buddha Nallah	2622	3825	915	1120
9	Satluj at 100 mts D/s Budha Nallah confluence Ludhiana	1166667	960750	528333	463000

10	Satluj at Boat Bridge, Dharamkot Nakodar Road	153000	67000	60333	19000
11	Satluj at D/s East Bein	19000	51500	7850	15075
12	Satluj at Harike	8200	5625	2350	1898
13	U/S Hussainiwala H/W Ferozepur	1850	753	515	256
14	D/S Hussainiwala H/W Ferozepur	1783	953	483	368

The above data indicate that there is improvement in water quality of river Sutlej w.r.t. parameter BOD and f-coli parameter at upstream and downstream of confluence point of Budha Nallah with River Sutlej and Sutlej at boat bridge (Dharamkot-Nakodar Road). However, high value of F. coli (463000 MPN/100ml) has been observed in river Sutlej at 100 m d/s Budha Nallah confluence point.

2.8.1.21 Comparison of water quality of Budha Nallah at various points for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 w.r.t. parameters BOD, COD, TSS, F.Coli/T.Coli, T.Cr., Hexa Cr, Ni, Zn, Cu, Mn, Fe, Pb.

Part-A: With respect to parameters: BOD, COD, TSS, T.Coli and F.coli .

Sr. No.	Point of sample collection	BOD mg/l		COD mg/l		TSS mg/l		T.Coli MPN/100ml		F.Coli MPN/100ml	
		Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec	Jan-Jun	Sep-Dec
1	Downstream of STP Jamalpur from Buddha Nallah	-	162	-	440	-	296	-	4400000	-	1950000
2	Downstream of Tibba Road disposal from Buddha Nallah	-	185	-	535	-	488	-	8850000	-	2950000
3	Downstream of Chand Cinema disposal from Buddha Nallah	-	245	-	666	-	524	-	8200000	-	2700000
4	Downstream of STP Balloke from Buddha Nallah	-	260	-	711	-	604	-	6300000	-	2600000
5	Point source of Biddha Nallah at Walipur	-	197	-	526	-	496	-	5600000	-	2200000
6	Before meeting with river satluj	197	150	619	442	258	366.5	3306667	4147500	1688333	2180000

Part-B: With respect to parameters: T.Cr, H.Cr, Copper, Zinc, Iron, lead and Nickel.

Sr. No.	Point of sample collection	T.Chrom mg/l		H.Chrom mg/l		Copper mg/l		Zinc mg/l		Iron mg/l		Lead mg/l		Nickel mg/l	
		Jan-Jun	Sep-Dec	Jan - Jun	Sep - Dec	Jan - Jun	Sep - Dec	Jan - Jun	Sep - Dec	Jan - Jun	Sep - Dec	Jan-Jun	Sep-Dec	Jan - Jun	Sep-Dec
1	Downstream of STP Jamalpur from Buddha Nallah	0.21	0.06	-	BDL	-	-	0.785	0.66	13.6	6.825	-	BDL	0.035	BDL
2	Downstream of Tibba Road disposal from Buddha Nallah	0.3	0.24	-	BDL	-	-	1.305	1.445	15.9	10.675	-	BDL	0.15	0.125
3	Downstream of Chand Cinema disposal from Buddha Nallah	0.3	0.5	-	BDL	-	-	1.23	2.65	14.7	22.3	-	BDL	0.15	0.25
4	Downstream of STP Balloke from Buddha Nallah	0.29	0.545	-	BDL	-	-	1.505	2.69	16.05	21.32	-	BDL	0.155	0.25
5	Point source of Biddha Nallah at Walipur	0.235	0.34	-	BDL	-	-	1.205	1.81	19.45	25.555	-	BDL	0.095	0.145
6	Before meeting with river satluj	0.32	0.1	BDL	BDL	0.02	BDL	2.2	1.49	24	15.2	0.03	BDL	0.14	0.09

The above data indicate that PPCB has started monitoring of Budha Nallah from September, 2019 onwards. However, the values of BOD,COD, TDS, T-coli & F-coli in Budha Nallah effluent are high and PPCB needs to identify the reasons for high values of these parameters. With regard to values of total chromium, Hexa Chromium, Copper, Zinc, Iron, Led, Nickel, there is improvement in these parameters at the end of Budha Nallah before meeting to River Sutlej. However, PPCB shall continuously keep strong surveillance on the functioning of CETP installed for electroplating industries and proper lifting of effluent from the electroplating industries.

2.8.1.22 Comparison of water quality of Kala Singhian drain at various points for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 w.r.t. parameters BOD, COD, TSS, F.Coli/T.Coli, T.Cr., Hexa Cr, Ni, Zn, Cu, Mn, Fe, Pb.

Part-A: With respect to parameters: BOD, COD , TSS, T.Coli and F.coli .

Sno	Locations	BOD		COD		TSS		T.coli		F.coli	
		Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec
1	Puli adjoining M/s H.B Industry Unit-II, Raowali, Pathankot Jalandhar Road.	56	36	180	117	101	52	-	-	-	-
2	Puli at Jalandhar-Maqsudan Road, adjoining DAV Play Ground	164	141	436	413	206	179	-	-	-	-
3	Puli at Basti Peer Dad- Leather Complex Road, adjoining Julka Rubber Industry.	119.5	104	291.5	280	176	155	-	-	-	-
4	Puli at Athaula Gazipur Road near Karyana Store.	139	126	415.5	350	222.5	215	-	-	-	-
5	Puli at Kapurthala –Kala Sangha Road near Gurudwara Tahli Sahib.	122.5	148	370	401	214.5	250	-	-	-	-
6	Puli at Billi-Khanpur Road.	157	121	424	361	251	275	-	-	-	-

Part-B: With respect to parameters: T.Cr, Nickle, Zinc, Iron and lead.

S.no	Locations	T.Cr		Ni		Zn		Fe		Pb	
		Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec
1	Puli adjoining M/s H.B Industry Unit-II, Raowali, Pathankot Jalandhar Road.	0.27	BDL	BDL	BDL	0.88	0.40	4.32	5.71	BDL	BDL
2	Puli at Jalandhar-Maqsudan Road, adjoining DAV Play Ground	1.29	0.2	1.03	0.30	2.5	2.39	7.55	10.34	1.86	BDL
3	Puli at Basti Peer Dad-Leather Complex Road, adjoining Julka Rubber Industry.	0.70	0.25	0.30	0.4	1.61	2.4	6.64	11.26	0.77	BDL
4	Puli at Athaula Gazipur	2.92	1.2	0.13	0.2	0.75	1.6	6.27	10.5	BDL	BDL

	Road near Karyana Store.										
5	Puli at Kapurthala – Kala Sangha Road near Gurudwara Tahli Sahib.	2.06	1.2	0.15	0.14	0.67	0.94	4.95	7.65	BDL	BDL
6	Puli at Billi-Khanpur Road.	2.74	3.14	0.2	1	1	4.5	7.4	14	BDL	BDL

The above data indicate that there is a improvement in Kala Singhian Drain effluent w.r.t parameter BOD, COD and TSS (at first four points) and total chromium. However, PPCB shall ensure that all the sewage disposal points into Kala Singhian Drain are closed. It shall also keep strong surveillance on lifting mechanism of effluent from electroplating industries as these industries have joined CETP, Ludhiana. PPCB shall ensure that no electroplating industry shall discharge its effluent into sewerage system or directly into Kala Singhian Drain.

2.8.1.23 Comparison of water quality of East Bein drain at various points for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 w.r.t. parameters BOD, COD, TSS, F.Coli/T.Coli, T.Cr., Hexa Cr, Ni, Zn, Cu, Mn, Fe, Pb.

Part-A: With respect to parameters: BOD, COD, TSS, T.Coli and F.coli .

		BOD		COD		TSS		F.coli		T.coli	
Sno	**Locations**	**Jan - June**	**Sept - Dec**	**Jan - June**	**Sept - Dec**	**Jan - June**	**Sept - Dec**	**Jan-June**	**Sept -Dec**	**Jan-June**	**Sept -Dec**
1	East Bein at Phagwara U/s Chaheru Bridg	10	9	46	38	42	28	1282	743	2317	1700
2	East Bein at Phagwara D/s Kanganiwal Bridge	33	20	149	87	102	43	21167	11950	37000	25250
3	East Bein at Jalandhar U/s Peeru Shah Ki Dargah	75	59	228	197	119	102	4430	17250	83500	68500
4	East Bein at Jalandhar D/s Malsian bridge	88	68	288	244	131	98	81167	31250	148167	99500

Part-B: With respect to parameters: T.Cr, H.Cr, Nickel, Zinc, Copper, Maganese, Iron and lead .

Sno	Locations	T.cr.		Hexa Cr.		Ni		Zn		Cu		Mn		Fe		Pb	
		Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec
1	East Bein at Phagwara U/s Chaheru Bridg	BDL	BDL	–	–	BDL	BDL	0.08	0.1	BDL	BDL	–	–	0.48	0.95	BDL	BDL
2	East Bein at Phagwara D/s Kanganiwal Bridge	BDL	BDL	–	–	BDL	BDL	0.125	0.08	BDL	BDL	–	–	0.73	0.89	BDL	BDL
3	East Bein at Jalandhar U/s Peeru Shah Ki Dargah	BDL	BDL	–	–	BDL	BDL	0.085	0.08	BDL	BDL	–	–	0.43	0.7	BDL	BDL
4	East Bein at Jalandhar D/s Malsian bridge	BDL	BDL	–	–	BDL	BDL	0.2	0.19	BDL	BDL	–	–	1.56	1.08	BDL	BDL

The above data indicate that there is improvement in East Bein drain effluent w.r.t parameter BOD, COD, TSS, T-coli & F-coli. The heavy metals namely total chromium, Nickel, Copper & lead have not been deducted. The value of zinc is in decreasing order. The value of iron have been found in increasing order.

2.8.1.24 Environmental Flow

The quality of water in a river can be maintained / restored by adopting the following mechanism. The Monitoring Committee recommends that the following directions be given to the State of Punjab.

i. Department of Water Resources and Department of Soil & Water conservation shall identify the area / stretches in the catchment area of river Sutlej for providing check dams / storage tanks for storage of run off / storm water during rainy days and the stored water may be released in regulated way so as to maintain the quality of drains/Nallah/river water at down streams.

ii. The Municipal Councils / Corporations / Department of Local Govt. shall install STPs to achieve the stringent parameters i.e. BOD : 10 mg/l, so that the resultant value of BOD after mixing with the river water may be nearly 3 mg/l.

iii. The industries be directed to achieve the stringent parameters i.e. BOD : 10 mg/l. The industries discharging wastewater, having toxic constituents, may not be allowed to discharge their effluent into drains/Nallah/rivers/ water bodies. These industries be directed to achieve Zero Liquid Discharge (ZLD) technology.

iv. The department of water resource has proposal to release 200 cusec water from Sirhind canal into Budha Nallah. The necessary amount has been deposited by PPCB and Municipal Corporation Ludhiana. The department of water resources

shall take immediate steps to construct infrastructure to release canal water in Budha Nallah to increase DO, reduce organic parameters and increase its aesthetic value.

v. PPCB has placed the order for installation of Real Time Water Quality Monitoring System in Budha Nallah (2) and in river Sutlej (4) shall be installed and commissioned by 31.3.2020.

2.8.1.25 Septage and Faecal Sludge management

To give up open defecation, in villages / undeveloped colonies of cities or towns, inhabitants have started using septic tank (online sanitation system) and soakage pit in their houses. The septic tanks contain 3 type of waste i.e. fecal sludge, septage and supernatant. The septage and feacal sludge are non-stabilized matter having obnoxious smell and are a big source of faecal coliform, which contaminate the underground water or river water, when these are discharged indiscriminately into water bodies. Thus, there is a need to identify online sanitation system provided in the rural areas and other under developed colonies of the cities.

The Monitoring Committee recommends that the Deptt. of Rural Development & Panchayat, Government of Punjab and Municipal Councils of the State may be directed to identify the sources of generation of septage and feacal sludge from rural and urban areas and a comprehensive plan to dispose off these materials in an environmentally sound manner be prepared in a time bound manner. There is need to identify and adopt the low cost technology which could treat the septage and fecal sludge before their discharge into the Environment.

2.8.2 River Beas

2.8.2.1 Performance of existing sewage treatment plants

River Beas									
Sr.no	**Name of STP**	**Cap**	**Jan 2019 to June, 2019 (Average)**			**September to December 2019 (Average)**			
			Paramaters			**Parameters**			
			BOD (mg/l)	**TSS (mg/l)**	**F-Coli (MPN/100 ml)**	**BOD mg/l**	**TSS mg/l**	**Faecal Coliform MPN/100ml**	**Remarks**
1	Pathankot	27	88	163	126333	101	126	16250	No improvement
2	Sri Hargobindpur	1	24	39	14117	24	34	940	Meeting with all parameters
3	Dasuya	4	26	30	7640	26	38	815	Meeting with all parameters
4	Mukerian	5	11	19	778	10	19	790	Meeting with all parameters
5	Sham Churasi	1	62	112	61500	63	116	8167	No improvement
6	Tanda	4	10	22	538	14	22	540	Meeting with all parameters
7	Talwara		7	15	427	7	19	695	Meeting with all parameters
8	Begowal	2.5	8	19	587	11	13	660	Meeting with all

									parameters
9	Bhulath	4	22	33	11320	24	28	1025	Meeting with all parameters
10	Kapurthala	25	36	49	5980	39	57	2200	Not meeting with BOD and F.coli parameter
11	Sultanpur Lodhi	2.6	32	37	14883	28	63	1080	Meeting with all parameters
12	GE, Air Force STP 960 m3/day Pathankot	3	38	26	17000	9	17	718	Meeting with all parameters
13	GE, South Mammon STP Lal Tikku Khad Area (2.5 MLD)	2	0	0	0	9	15	570	Meeting with all parameters
14	GE, West Pathankot	8	0	0	0	12	17	763	Meeting with all parameters
15	GE, South Mammon Bhaskar Area	2	0	0	0	9	24	503	Meeting with all parameters
16	GE, South Basanter Line Area	2	0	0	0	7	10	535	Meeting with all parameters

The above data indicate that out of 16 STPs installed in the catchment area of river Beas, 13 STPs (81.25%) are meeting with all parameters. 2 STPs (12.5 %) are not meeting with BOD, TSS and F.coli parameters. 1 STP (6.25 %) is not meeting with BOD and F.coli parameter.

2.8.2.2 Status of STPs under construction (Beas)

- Presently, no STP is under construction

2.8.2.3 Status of STPs under planning and funds tied up

S.No.	Name of the town	Capacity of STP	Likely date of completions	Earlier status as on 30/09/2019	Current status as on 31.12.2019
1.	Kartarpur	4	31.10.2020	Tender called and to be opened on 30.10.2019	Tender called and to be opened on 21.01.2020
2.	Dhilwan	2.5	Land issue	Case of land pending in DC Office at DRO level	Case of land pending in DC Office at DRO level
3.	Kothi Pandita, Pathankot	2	31.05.2020	DNIT under preparation	DNIT under preparation
4.	Adarsh Nagar, Pathankot	1.2	31.05.2020	DNIT under preparation	DNIT under preparation
5.	Hariana	2	31.10.2020	Tender called and to be opened on 30.10.2019	Tender called and to be opened on 23.01.2020
6.	Sultanpur Lodhi (2 N0.)	1+4	31.10.2020	-Land for 4 MLD is being identified. -1 Mld- Land available. Tender under process.	-Land for 4 MLD is being identified. -1 Mld- Land available. Tender under process.
	Total	16.7			

2.8.2.4 Status of STPs under planning but funds are yet to be tied up

S.N	Name of the town	Discharge (MLD)	Earlier status as on 30/09/2019	Current status as on 31.12.2020
1.	Talwara	4	Funds Not tied up Case sent to Govt. of Punjab for arrangement of funds	Funds Not tied up Case sent to Govt. of Punjab for arrangement of funds
2.	Sujanpur(2 No.)	2+3.5	Funds Not tied up. Land issue. Case sent to Government of Punjab for arrangement of funds.	Funds Not tied up. Land issue. Case sent to Government of Punjab for arrangement of funds.
3.	Rawal & Colonies, Kapurthala	3	Land purchased through PUDA. Funds for STPs to be given by MC.	Land purchased through PUDA & DPR under approval. Funds for STPs to be given by Rural Development Deptt. & JDA.
	Total	12.5		

2.8.2.5 STPs which require technologically upgradation and funds not tied up so far

Sr. no.	Name of the town	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date for completion/ commissioning	Earlier status as on 30/09/2019	Current status as on 31.12.2020
1	Sri Hargobind pur	1	1	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
2	Dasuya	4	4	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
3	Sham Chaurasi	1	1	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
4	Bhulath	4	4	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
5	Kapurthala	25	25	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
	Total	**35**	**35**			

2.8.2.6 Gap Analysis of sewage of the towns located on River Beas

Sr. No.	Name of the Town	Total Discharge (MLD)	Present capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1.	Sri Hargobindpur	1	1	0
2.	Dasuya	4	4	0
3.	Hariana	2	0	2
4.	Mukerian	5	5	0
5.	Sham Churasi	1	1	0
6.	Talwara	4	0	4
7.	Tanda	4	4	0
8.	Kartarpur	4	0	4
9.	Begowal	2.5	2.5	0
10.	Bhulath	4	4	0
11.	Dhilwan	2.5	0	2.5
12.	Kapurthala	28	25	3
13.	Sultanpur Lodhi	7.6	2.6	5
14.	Sujanpur	5.5	0	5.5
15.	Pathankot	30.2	27	3.2
	Total	**105.3**	**76.1**	**29.2**

As per above data, there is gap in sewage quantity of towns: Haryana (2 MLD), Talawara (4 MLD), kartarpur (4 MLD), Dhilwan (2.5 MLD), Kapurthala (3MLD), Sultanpur Lodhi (5 MLD), Sujanpur (5.5 MLD) and Pathankot (3.2 MLD). Thus, there is total gap of 29.2 MLD in sewage quantity to be treated is 29.2 MLD for which immediate steps may be taken by the department of Local Government to make arrangement of funds for installation of STPs.

2.8.2.7 Status of completed STPs in the villages

Sr.No.	Name of District	Name of Block	Name of villages	Discahrge in KLD	Remarks
1	Kapurthala	Nadala	Bhadas	300	Completed
2	Gurdaspur	Gurdaspur	Chawa	120	Completed

2.8.2.8 Status of STPs in the villages which are under progress

Sr.No.	Name of District	Name of Block	Name of villages	Discahrge in KLD	Remarks
1	Gurdaspur	Kahnuwan	Gurdwara Ghallu Ghara	50	Funds clearance awaited.
2	Gurdaspur	Quadian	Bham	615	under progress
3	Gurdaspur	Quadian	Kiri Afgana	299	under progress

2.8.2.9 Details of the Villages which have been taken in Phase-II for installation of STPs

35 villages located in the catchment area of river Beas have been taken into Phase-II for installation of STPs. The detail of these villages is mentioned as under:

S.no.	Name of district	Name of Block	Name of Villages	Discharge in KLD	Directly/Indirectly Discharge
1.	Kapurthala	Kapurthla	Daburji and Kadupur	283	Beas
2.	Kapurthala	Kapurthla	Mainwan	101	Beas
3.	Kapurthala	Kapurthla	Kot Karar Khan	200	Beas
4.	Kapurthala	Kapurthla	Chuharwal	140	Beas
5.	Kapurthala	Kapurthla	Bhulana	152	Beas
6.	Kapurthala	Sultanpur Lodhi	Tudarwal	52	Beas
7.	Kapurthala	Dhilwan	Tajpur	90	Beas
8.	Kapurthala	Nadala	Chanchok	47	Beas
9.	Kapurthala	Dhilwan	Dhogarwal	175	Beas
10.	Gurdaspur	Gurdaspur	Pakhowal	160	Beas
11.	Gurdaspur	Gurdaspur	Chanderbhan	205	Beas
12.	Gurdaspur	Kahnuwan	Nainowal Jinder	220	Beas
13.	Gurdaspur	Gurdaspur	Nadala 647	53	Beas
14.	Gurdaspur	Dinanagar	Kot Bhalla	85	Beas
15.	Gurdaspur	Kahnuwan	Bhaini Mian Khan	291	Beas
16.	Jalandhar	Jalandhar West	Bhikhan Nangal	66	Beas
17.	Jalandhar	Jalandhar West	Cheema	120	Beas
18.	Jalandhar	Jalandhar West	Ambgarh	170	Beas
19.	Hoshiarpur	Hajipur	Handwal	350	Beas
20.	Hoshiarpur	Talwara	Sathwan	400	Beas
21.	Hoshiarpur	Talwara	Chaggravan	425	Beas

22.	Hoshiarpur	Mukerian	Kalota	100	Beas
23.	Hoshiarpur	Mukerian	Salarian Kalan	100	Beas
24.	Hoshiarpur	Mukerian	Palaki, Mojjowal	150	Beas
25.	Hoshiarpur	Mukerian	Bhangala	500	Beas
26.	Hoshiarpur	Mukerian	Purana Bhangala	350	Beas
27.	Hoshiarpur	Mukerian	Dhaula Khera	150	Beas
28.	Hoshiarpur	Mukerian	Chak Sarwani	30	Beas
29.	Hoshiarpur	Mukerian	Mehtabpur	250	Beas
30.	Hoshiarpur	Mukerian	Landey, Musahibpur	300	Beas
31.	Hoshiarpur	Mukerian	Budhpur Colony & Budhpur Pind	150	Beas
32.	Hoshiarpur	Mukerian	Atalgarh	200	Beas
33.	Hoshiarpur	Mukerian	Golra	200	Beas
34.	Hoshiarpur	Mukerian	Ghallian	150	Beas
35.	Hoshiarpur	Mukerian	Taggar Kalan	300	Beas
				6715	

2.8.2.10 The details of the villages in the catchment area of river Beas which have been taken in phase-III for installation of STPs

35 villages located in the catchment area of river Beas have been taken into Phase-III for installation of STPs. The detail of these villages is mentioned as under:

S.no.	Name of district	Name of Block	Name of Villages	Discharge in KLD	Directly/Indirectly Discharge
1.	Kapurthala	Kapurthla	Nanakpura	101	Beas
2.	Kapurthala	Nadala	Talwara	128	Beas
3.	Kapurthala	Nadala	Talwandi Purdal	101	Beas
4.	Kapurthala	Nadala	Littan	258	Beas
5.	Kapurthala	Dhilwan	Bamuwal	277	Beas
6.	Kapurthala	Dhilwan	Muddowal	143	Beas

7.	Kapurthala	Dhilwan	Ramidi	263	Beas
8.	Gurdaspur	Kahnuwan	Ghookla	44	Beas
9.	Gurdaspur	Kahnuwan	Nainowal Khurd	98	Beas
10.	Gurdaspur	Kahnuwan	Gunopur	75	Beas
11.	Gurdaspur	Kahnuwan	Bhorian	90	Beas
12.	Gurdaspur	Kahnuwan	Darapur Drain	150	Beas
13.	Gurdaspur	Kahnuwan	Kotli Harchanda	185	Beas
14.	Gurdaspur	Kahnuwan	Kahnuwan	210	Beas
15.	Jalandhar	Jalandhar West	Malian	185	Beas
16.	Hoshiarpur	Mukerian	Muradpur Awana	450	Beas
17.	Hoshiarpur	Mukerian	Doogri Colony	350	Beas
18.	Hoshiarpur	Mukerian	Doogri Rajputtan, Salarian Khurd	400	Beas
19.	Hoshiarpur	Mukerian	Tanda Ram Sahai	500	Beas
20.	Hoshiarpur	Mukerian	Barota	250	Beas
21.	Hoshiarpur	Mukerian	Abdulpur	325	Beas
22.	Hoshiarpur	Mukerian	Mauli	400	Beas
23.	Hoshiarpur	Mukerian	Bagrohi	250	Beas
24.	Hoshiarpur	Mukerian	Amirpur Jattan	350	Beas
25.	Hoshiarpur	Dasuha	Sadarpur nagra	200	Beas
26.	Hoshiarpur	Dasuha	Sehge	200	Beas
27.	Hoshiarpur	Dasuha	Bhuchhan	500	Beas
28.	Hoshiarpur	Dasuha	Chak Bhamu	200	Beas
29.	Hoshiarpur	Dasuha	Alampur	500	Beas
30.	Hoshiarpur	Tanda	Kalwan	500	Beas
31.	Hoshiarpur	Tanda	Gilzian	700	Beas
32.	Hoshiarpur	Tanda	Ibrahimpur	300	Beas
33.	Hoshiarpur	Tanda	Mada	150	Beas
34.	Hoshiarpur	Tanda	Kadari Chak	100	Beas
35.	Hoshiarpur	Tanda	Kotli	200	Beas
Total				9133	

2.8.2.11 Towns/STPs where irrigation projects for utilization of treated sewage for irrigation have been commissioned (as on 31.12.2019)

S. no.	Name of STP/town	District	Capacity of STP (MLD)	Command area (ha)	Date of start of project	Current status as on 31.12.2019	Date of completion
1.	Sri Hargobindpur	Gurdaspur	1	96	13.06.2016	Completed	20.11.2017
2.	Nurmehal	Jalandhar	2.6	105	01.06.2016	Completed	10.06.2019
3.	Bholath	Kapurthala	4.8	260	01.03.2014	Completed	01.06.2018
4.	Kapurthala	Kapurthala	25	484	2015	Completed	25.06.19
5.	SultanpurLodhi	Kapurthala	2.7	100	01.07.2016	Completed	01.05.2008
6.	Sham Chuarasi	Hoshiarpur	1	90	05.10.2016	Completed	29.06.18
7.	Talwara	Hoshiarpur	8	70	18.03.2017	Completed	
8.	Mukerian	Hoshiarpur	5	100	16.06.2017	Completed	16.10.2017
9.	Kapurthala	Kapurthala	25	484	1.4.2015	Completed	31.12.2019
10	Nurmehal	Jalandhar	2.6	105	01-06-2016	Completed	31.12.2019
11	Beogwal	Kapurthala	2.6	66	1.2.2012 & 01-05-2019	Completed	31.12.2019
Total			80.3				

2.8.2.12 Status of Towns/STPs where funds have not been tied up for irrigation projects (as on 31.12.2019).

S.no.	Name of the STP/town	District	Capacity (MLD)
1.	Pathankot	Pathankot	27
2.	Tanda	Hoshiarpur	4
3.	GE, Air Force	Gurdaspur	3
4.	GE, South	Gurdaspur	2
5.	GE, West	Gurdaspur	2
6.	GE, Mammon	Gurdaspur	2
7.	GE, North	Gurdaspur	2

2.8.2.13 Comparison of water quality of river Beas at various points for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 w.r.t. parameters DO, BOD, TSS and F.Coli/T.Coli.

Part-A: With respect to parameter: DO, BOD and TSS

S. No	Locations	DO		BOD		TSS	
		Jan-June	Sept-Dec	Jan-June	Sept-Dec	Jan-June	Sept-Dec
1	Beas at Talwara H/W	8.3	7.4	1	1	12	10
2	Beas at Mirthal Bridge Gurdaspur	8.7	7.8	1	1	14	10
3	U/S Pathankot	8.6	7.8	1	1	18	11

4	D/S Pathankot	8.3	7.5	1	1	23	15
5	Beas 1km D/S effluent discharge point at Mukerian	7.9	7.7	2	1	25	18
6	Beas Bridge at village Bheate Patan Tehsil Batala Distt. Gurdaspur	8	8	2	1	24	14
7	Beas at G.T. Road, under Bridge Near Kapurthala	8.5	7.7	2	1	30	17
8	U/s Goindwal	8.6	7.8	1	1	29	15
9	D/s Goindwal	8.3	7.8	1	1	31	16
10	Beas at Harike	8.3	8	1	1	31	15

Part-B: With respect to parameter: T.Coli and F.coli

S.No	Locations	Tcoli		Fcoli	
		Jan-June	Sept-Dec	Jan-June	Sept-Dec
1	Beas at Talwara H/W	79	83	37	42
2	Beas at Mirthal Bridge Gurdaspur	116	82	57	39
3	U/S Pathankot	187	98	118	55
4	D/S Pathankot	570	355	303	209
5	Beas 1km D/S effluent discharge point at Mukerian	758	485	422	253
6	Beas Bridge at village Bheate Patan Tehsil Batala Distt. Gurdaspur	418	305	273	185
7	Beas at G.T. Road, under Bridge Near Kapurthala	493	303	303	146
8	U/s Goindwal	370	238	188	131
9	D/s Goindwal	407	283	210	165
10	Beas at Harike	360	250	213	140

Water quality of river Beas at various points as monitored during the period January, 2019 to June, 2019 and September, 2019 to December, 2019, w.r.t parameters DO, BOD and F.coli indicate that water quality of river Beas is class-B as per the water quality criteria prescribed by CPCB.

2.8.2.14 Comparison of water quality of Holy Bein (Kali Bein) at various points for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 w.r.t. parameters BOD, COD, TSS, T. Coli and F. Coli.

Part-A : With respect to parameters: BOD, COD , TSS, T.Coli and F.coli .

S.No.	Location	BOD (mg/l)		COD (mg/l)		TSS (mg/l)	
		Jan - June	Sept - Dec	Jan - June	Sept - Dec	Jan - June	Sept - Dec
1	Nanakpur Bridge	2.5	2.6	17	17	18	21
2	Kapurthala P/S	40	57	155	166	45	69
3	Khera Dona Bridge	5.4	6	30	32	31	32
4	Gurudwara Sant ghat	4	4	23	22	23	22
5	Ber Sahib Gurudwara sultanpur Lodhi (Gurudwara side)	3.7	3.4	22	22	22	26

Part-B : With respect to parameters : T. Coli and F. Coli

S.No.	Location	T.coli (MPN/100 ml)		F.coli (MPN/100 ml)	
		Jan -June	Sept - Dec	Jan -June	Sept - Dec
1	Nanakpur Bridge	335	370	195	220
2	Kapurthala P/S	10950	25250	4217	7100
3	Khera Dona Bridge	807	320	427	175
4	Gurudwara Sant ghat	435	353	227	188
5	Ber Sahib Gurudwara sultanpur Lodhi (Gurudwara side)	432	270	238	153

The above data indicate that the values of BOD, COD, TSS and F.coli in the month of January to June, 2019 vary between 2.5-5.4 mg/l, 17-30 mg/l, 18-31 mg/l, 195-427 MPM/100 ml. In the month of September-December, 2019, these values were observed as BOD: 2.6-6.0 mg/l , COD: 17-32 mg/l, TSS: 21-32mg/l, F.coli: 175-220 MPM/100 ml. As per the data the water quality of Holy Bein is class B-C.

2.8.2.15 Environmental Flow

The quality of water in a river Beas can be further maintained / restored by adopting the following mechanism. For maintaining and restoring the quality of water, the following recommendations are made.

i. Department of Water Resources and Department of Soil & Water conservation shall identify the area / stretches in the catchment area of river Beas for providing check dams / storage tanks for storage of run off / storm water during rainy days and the stored water may be released in regulated way so as to maintain its quality at down streams.

ii. The Municipal Councils / Corporations / Department of Local Govt. shall install STPs to achieve the stringent parameters i.e. BOD : 10 mg/l, so that the resultant value of BOD after mixing with the river water may be nearly 3 mg/l.

iii. Industries be directed to achieve the stringent parameters i.e. BOD : 10 mg/l. The industries discharging wastewater, having toxic constituents, may not be not allowed to discharge their effluent into Rivers / water bodies. These industries be directed to achieve Zero Liquid Discharge (ZLD) technology.

iv. PPCB has placed the order for installation of Real Time Water Quality Monitoring System (RTWQMS) in river Beas at one location and are likely to be installed and commissioned by 31.3.2020.

2.8.2.16 Septage and Faecal Sludge management

To give up open defecation in the villages / undeveloped colonies of cities or towns, the residents have started using septic tank (online sanitation system) and soakage pit in their houses. The septic tanks contain 3 type of waste i.e. fecal sludge, septage and

supernatant. The septage and feacal sludge are non-stabilized matter having obnoxious smell and are a big source of feacal coliform, which contaminate the underground water or river water, when these are discharged indiscriminately into water bodies. Thus, there is a need to identify online sanitation system provided in the rural areas and other under developed colonies of the cities.

The Monitoring Committee recommends that the Deptt. of Rural Development & Panchayat, Government of Punjab and Municipal Councils of the State may be directed to identify the sources of generation of septage and feacal sludge from rural and urban areas and a comprehensive plan to dispose off these materials in an environmentally sound manner be prepared in a time bound manner. There is need to identify and adopt the low cost technology which could treat the septage and faecal sludge before their discharge into the Environment.

2.8.2.17 Information, Education and Communication (IEC) Activities

The following activities were carried out by PPCB and Department of Local Government to bring awareness among the public about the protection of Environment.

Punjab Pollution Control Board

a) World Environment Day

i. On the World Environment day (5 November, 2019), the State level function was celebrated at IIT, Roopnagar. Speaking on the State level function, Hon'ble Chief Minister, Punjab underlined the importance of an apolitical approach to addressing environmental concerns to provide sustainable atmosphere and called for collective efforts by each citizen to check pollution, conserve ground water. He called upon the industry to take appropriate steps to check the pollution caused by their factories and adherence to environmental standards and further said that throwing of waste into the rivers is not acceptable. He also carried out plantation during the celebrations.

ii. On the eve of World Environment Day, 2019, PPCB has signed an MOU with IIT, Delhi to carry out source apportionment study of 7 cities:- Jalandhar, Patiala, Khanna, MGG, Naya Nangal, Dera Bassi and Dera Baba Nanak.

b) Plastic free and clean Punjab campaign

i. PPCB launched campaign with effect from 2nd October 2019 regarding ill effects of single use plastic in association with NGOs, NSS volunteers, school students. During the campaign, general public was made aware about ill effects of plastics, shifting towards eco friendly alternatives and also distributed jute bags.

ii. On the eve of 550th Gurpurab of Sri Guru Nanak Dev ji and 150th birth anniversary of Mahatma Gandhi ji, PPCB in association with District Administration and Local Body carried out various activities from 2nd October to

17th October 2019 to make Patiala city plastic free. About 4,000 jute bags were distributed to the general public.

iii. Also, during these days (Oct.2-Oct.17, 2019), 4 Wards of the city were cleaned everyday by a team under the supervision of senior officer of PPCB. During this campaign, more than 12 ton plastic waste was collected and the same was sent to plastic waste recycling units and cement plants.

iv. On the occasions of 550th Birth Anniversary of Shri Guru Nanak Dev Ji, the Government of Punjab has taken an initiative to develop Sultanpur Lodhi of District Kapurthala as Model City as "First Plastic Free City" of the State. PPCB carried out various activities from 2nd October 2019 to 15th November 2019 at Sultanpur Lodhi to make city plastic litter free as well as to create awareness not to use single use plastic.

v. PPCB in collaboration with District Administration and Local Body carried out cleaning drive from 2nd October 2019 to 12th November 2019 in 13 wards of the city and created awareness regarding plastic free Sultanpur Lodhi through exhibition, audio & video messages and by displaying banners / hoardings. PPCB distributed 4,00,000 nos. bio-compostable carry bags & 1,000 no. paper stickers to various shops, halwais, hotels etc. and 25,000 cloth & 4,000 jute bags to general public to sensitize them to stop use of single use plastic. PPCB also installed 2 no. plastic bottles shredding vending machines in the city.

c) Awareness regarding "No to Stubble Burning"

i. In order to spread the message regarding 'No to Stubble Burning' through NSS Volunteers, a meeting with the Vice Chancellors of Punjabi University, Patiala, Punjab Agriculture University, Ludhiana, GADVASU, Ludhiana and Guru Nanak Dev University, Amritsar was held by the Chairman, PPCB on 5th September 2019. Accordingly, the programme Officers of NSS Department of all the 4 Universities were given training by Punjab Agriculture University, Ludhiana under the leadership of project coordinators. [(Punjabi University, Patiala on 09.09.2019); (Punjab Agriculture University, Ludhiana, & GADVASU, Ludhiana on 11.09.2019); (Guru Nanak Dev University, Amritsar on 13.09.2019)].

ii. After training, 6000 teams of 20 volunteers each were constituted from NSS units of Punjab to spread the message of "No to Stubble Burning" to farmers of all the villages in the State with publicity material and flex Boards by the Punjab Pollution Control Board. These 1.20 lakh volunteers carried out the exercise on 4th October 2019 in 12,984 villages. These teams were also carrying the message to the identified hot spot villages during the paddy harvesting season exclusively.

iii. Regional Offices of the PPCB setup stalls in the 7 Kissan Melas organized by PAU, Ludhiana in different regions of the State. The officers of the Board participated

and interacted with the farmers during these melas to spread the message to stop stubble burning.

d) Awareness to manage bio-medical waste

All the 14 Regional Offices of the Board organized awareness camps from time to time to make hospitals aware about their responsibilities under the Bio-Medical Waste Management Rules, 2016. During the last year, 110 awareness camps were organized by the PPCB, in which more than 2,500 health care facilities participated.

e) Awareness to manage e-waste

All the 14 Regional Offices of the Board organized awareness camps on 10th October 2019 to make various stake holders including bulk consumers aware about their responsibilities under the E-Waste Management Rules, 2016 for channelization of the e-waste in an environmentally sound manner and submission of annual returns under the said rules.

f) Regional National Conference under the theme "No Time Left, Act Now" on 14-15th December 2019

- The Government of Punjab, Deptt. of Science, Technology & Environment alongwith Punjab Pollution Control Board (PPCB) organized Regional National Conference under the theme "No Time Left, Act Now" from 14.12.2019 to 15.12.2019. The conference was presided over by Chairperson, National Green Tribunal, New Delhi.
- The Conference created awareness among the various stake holders and departments to apprise them of their responsibilities to protect the environment. Various departments, stake holders, leading experts in the field of environment pollution and its control, strategists, national level research institutes, universities and research scholars deliberated together to come out with a blue point for future course of actions. This conference was an important occasion towards control of environmental pollution in the state of Punjab.
- The conference cover various issues like healthy environment for healthy people; State Action Plans; the journey so far; best practices for environmental protection and management and role of research, innovation and technologies in facing environmental challenges.
- Hon'ble Justice expressed confidence that this conference would be a model itself in the Country to disseminate the message of environment preservation, which could be efficaciously replicated at the grassroots level across the country.

The Department of Local Government through Punjab Municipal Infrastructure Development Corporation (PMIDC)

a) Solid Waste Management

The IEC teams have been deployed by Punjab Municipal Infrastructure Development Corporation (PMIDC), which are focusing on 3Rs principle, Sources segregation, collection / transportation of waste in a segregated manner, composting of wet waste including home composting and composting of horticulture waste, material recovery. Further, the awareness campaign on the following issues is also made:

- Hazards of single use plastic and use of cloth/ jute bags, pattals, Daunas and kulhars in place of SUP cutlery.
- Hazards of burning of waste, throwing of waste in the water bodies and littering are explained to the people.
- Setting up of Bartan Bhandars, Jhola Bhandars (cloth bags), rags to bags, "Neki ki Deewar" .

b) Management of Plastic Waste management.

Awareness is created to stop the use of "Single Use Plastic" items like plastic Carry bags, plastic and thermocol Plates, Cups, Bowls, Forks, spoons, water bottles/ pouches including nonwoven plastic carry bags in general and particularly in social, religious and official events.

c) Management of Construction & Demolition Waste.

Awareness is created about hazards of C&D Waste dumped in streets/ roads/ vacant plots. Publicity is also given for the sites notified for collection of C& D Waste.

d) Sanitation and Hygiene/ Attaining and sustaining ODF status

Awareness is created among the public to stop open defecation and hygiene issues.

e) Garbage Free cities

Wide interactions are held for Garbage Free City Certification among the Citizen while completion of GFC protocol.

f) Swachh Survekshan

Wide publicity is made for Swachh Survekshan through wall writings, AIR, News Papers every year.

g) Awareness Drives/ Exposure Visits

- A 5 day long awareness drive was conducted from 01st -05th June, 2019 on the World Environment day.
- A 38 day long "Swachhta Hi Sewa" Campaign was conducted from 11th September, 2019 to 27 October, 2019. During this period 19162 numbers of events/awareness programmes were conducted and 88 lakh participants were involved and 474 Tons of plastic waste was collected and two consignments of plastic waste were despatched to M/s Ambuja Cement Works Ltd, Darlaghat, Shimla.
- Municipal Corporation Jalandhar in coordination with the Sodal Mela authorities managed plastic use free event. Now MC Jalandhar has launched POLYEND campaign for ending use of Polythene carry bags.
- A special refresher training Programme on Behaviour Change Communication for Solid Waste management for 400 Community Facilitators and Motivators has been conducted by PMIDC on campaign mode from 01-15 January,2020 at all the Headquarters of Regional Deputy Directors.

2.9 Conclusions and recommendations:

Based on the observations made during the visit to the industries and pollution sources, discussion held with the State and District level officers, data with regard to performance of existing STPs, installation of new STPs, STPs under planning, STPs which require technology up gradation and gap in treatment of sewage, treatment of sewage of villages, utilization of treated sewage for irrigation, water quality of drains/nallahs, river Sutlej and Beas, the following conclusions and recommendations are made.

A) River Sutlej

1. Punjab Pollution Control Board is regularly carrying out the monitoring of sewage treatment plants of the towns located in the catchment area of river Sutlej. The monitoring data indicate that out of 50 STPs monitored during January 2019 to June 2019 and September 2019 to December 2019, 26 STPs (52%) are complying with all the norms. In 10 STPs (20%) BOD and TSS parameters are within the norms but F.coli parameter not within the norms. 5 STPs (10%) are meeting with TSS parameter but not meeting with the BOD and F.coli

parameters. No improvement w.r.t BOD, TSS and F.coli parameters was observed in 5 STPs (10%). No data available in case of 2 STPs (4%). 2 STPs (4%) were found not meeting with BOD parameter alone. Therefore, the Monitoring Committee recommends as under:

- ✓ Municipal Corporations/ Municipal Councils/ PWSSB or any other agency operating the STPs, should operate their STPs as per the operation and maintenance manual prepared by PWSSB.
- ✓ These departments should impart trainings to the Supervisory staff.
- ✓ In order to bring down the F. coli parameter within the norms, adequate dosing of disinfectant with proper disinfectant contact mechanism should be provided.
- ✓ Concerted efforts may be made by all the concerned departments to bring down the non compliance of STPs to significantly low level.
- ✓ OCEMS along with flow meters shall be installed at inflow, outflow and bye-pass of the STPs and record in this regard may be maintained by the STP operator.
- ✓ OCEMS and CCTV cameras on all the STPs may be ensured to be installed by 31/01/2020, failing which environment compensation may be imposed by PPCB on the defaulting STPs.

2. For the treatment of sewage of the towns located in the catchment area of river Sutlej, 53 STPs have been installed. 5 STPs in 3 towns namely Guru Har Sahai, Kotkapura and Giddadbaha are under construction and progress w.r.t construction of these STPs has been increased from 2% to 5 % (Guru Har Sahai: 4 MLD), 2% to 7% (Guru Har Sahai: 1 MLD), 75% to 80% (Kotkapura: 6MLD). Upto September, 2019, STP Giddadbaha was mentioned as completed and electric connection was under progress but now after the expiry of 3 months i.e upto 31.12.2019, again the status of STP is same, which indicate that very slow progress has been made to construct and commission these STPs.

The Monitoring Committee recommends that the Punjab Water Supply & Sewerage Board should give more attention towards the completion of STPs especially for the town Guru Har Sahai. Giddadbaha STP should be made operational by 31.1.2020.

3. 12 STPs of capacity 353 MLD, for which funds have been tied up, are under planning. 4 STPs for the towns Balachaur, Garhshankar, Maluka and Rahon are still at tendering stage. In case of 3 STPs (Ferozpur: 1MLD, Sri Mukatsar Sahib: 10MLD and Kiratpur Sahib: 2MLD), no substantial progress has been made. In

other 5 STPs, either re-tendering has been done or land acquisition process has been started.

The Monitoring Committee recommends that the Department of Local Government and Punjab Water Supply and Sewerage Board should give attention towards the completion of these STPs by 31.10.2020.

4. 10 STPs of capacity 28 MLD for 10 towns (Bhagta Bhaika, Bhai Roopa, Kotha Guru, Arniwala, Mallan Wala, Mamdot, Mudki, Mahilpur, Nihal singh wala and Barhi wala) are under planning but the funds have not been tied up so far. Moreover, no sewerage system exists in these towns.

   The Monitoring Committee recommends that the department of Local Government and Punjab Water Supply and Sewerage Board shall provide sewerage system in these towns by 31.3.2020 and STPs for these towns may be completed by 31.12.2020.

5. There is proposal to upgrade STP of capacity 100 MLD of Jalandhar town for which DPR is under preparation and funds have been tied up in AMRUT and Smart city scheme but the State share is yet to be arranged. Similarly in case of Ludhiana, there is proposal to upgrade technologically all the 5 STPs of capacity 466 MLD. For these STPs, DPR is under preparation and funds have been tied up in AMRUT and Smart city scheme but the State share is yet to be released.

   The Monitoring Committee recommends that the Department of Local Government shall take up the matter with department of Finance, Government of Punjab for early release of State share so that these STPs may be upgraded technologically by 31.12.2020.

6. There is a gap of 381 MLD sewage of 22 towns (out of 50 towns) for which no arrangements have been made to provide the funds to treat the sewage so that water quality of river Sutlej is improved.

   It is recommended that the Deptt. of local Government, GMADA and Department of Water Supply and Sanitation should make arrangements to provide funds for treatment of gap sewage discharge of 381 MLD in a time bound manner so that STPs may be completed by 31.12.2020.

7. Out of 75 villages selected in phase-I for installation of sewage treatment plant, STPs in 4 villages (Dihana, Rattanpura, Hazara and Raowali) have been completed. For the remaining 71 villages, funds are required to be arranged by the Department of Rural Development and Panchayat for which the Department may take up the matter with the Department of Finance, Government of Punjab.

8. For 23 STPs, irrigation projects have been completed and commissioned. For the remaining STPs, the Department of soil and Water conservation shall lay irrigation network by 31.12.2020.

9. For 14 STPs, irrigation projects for utilization of treated sewage for irrigation have been sanctioned but the funds have not been released so far.

   The Department of soil and water conservation shall take up the matter with department of Finance, Government of Punjab for early release of funds.

10. Regarding reuse of treated wastewater of STPs at Phariwal (Jalandhar of capacity 100 MLD), Jamalpur, Balloke and Bhattian (Ludhiana) of total capacity 466 MLD, department of Soil and Water Conservation has carried out the feasibility studies, which is mentioned as under:

    - For 100 MLD STP at Pholriwal, Jalandhar, the project is not feasible as the farmers are reluctant to use treated wastewater.
    - In case of 48 MLD STP Jamalpur (Ludhiana), it has been mentioned that STP is lying defunct and PWSSB has planned to construct a new STP based on SBR technology.
    - For use of 50 MLD STP treated wastewater of Bhattian (Ludhiana), the quality of treated wastewater has not been found fit for irrigation.
    - For utilization of treated wastewater of 152 MLD STP (Ballloke-I, Ludhiana) and 105 MLD (Balloke-II, Ludhiana) for irrigation, the project has been found feasible and tentative estimate of Rs 141.43 crore has been prepared but the funds are yet to be tied up.

    The Committee recommends that the Department of Local Government shall conduct IEC activities to bring confidence among the farmers for utilization of treated sewage of 100 MLD STP, Pholriwal, Jalandhar. Also, regarding release of funds amounting to Rs. 141.43 crore for laying irrigation network to utilize treated sewage of 152 MLD and 105 MLD STPs Balloke, Ludhiana, the matter may be taken up with the Department of Finance, Government of Punjab.

11. Textile dyeing industries of Ludhiana have installed their individual effluent treatment plants. However, in order to maintain one outlet and achieve the stringent standards, 3 CETPs of capacity 15 MLD, 40 MLD, 50 MLD are under construction.

    - 15 MLD CETP for treatment of effluent of dyeing industries of Bahadurke road Ludhiana, was proposed to be commissioned by 30.06.2019 but it has been completed (100%) in the month of December 2019.

- CETPs of capacity 40 MLD and 50 MLD have been completed to 93% and 67%, respectively.

The Monitoring Committee recommends that these 40 MLD and 50 MLD CETPs should be completed by 31.3.2020, failing which Punjab Pollution Control Board shall impose environment compensation of suitable amount on the SPVs of these CETPs.

12. For upgradation of 5 MLD CETP and installation of new 6 MLD CETP for treatment of wastewater of leather Complex, Jalandhar, DPR has been prepared and the same is pending with CLRI for vetting.

The Monitoring Committee recommends that PPCB shall take up the matter with CLRI to get the DPR vetted and SPV of leather complex, Jalandhar may be directed to initiate the process of installation of new CETP of capacity 6 MLD and upgradation of existing CETP of capacity 5 MLD by 28.2.2020.

13. For installation of new CETP of capacity 0.15 MLD for electroplating industries of Jalandhar area, the work of CETP was started but due to public resistance, work has been stopped. As per the decision of the Deputy Commissioner, Jalandhar, work of CETP shall be restarted after obtaining necessary permission from the concerned department and with the help of Punjab police.

It is recommended that Deputy Commissioner, Jalandhar shall get start the construction work of 0.15 MLD CETP for electroplating industries of Jalandhar by 15.2.2020. PPCB shall take up the matter with Deputy Commissioner, Jalandhar immediately.

14. For installation of new CETPs to treat the effluent from focal points of the State, An SPV has been formed under the name & style of M/s Amritsar Textile Effluent Treatment (P) Ltd., for the installation of CETP for dyeing industries of New Focal Point, Amritsar. The PSIEC has not handed over the plot for the construction of CETP. The matter is pending with the MD, PSIEC.

It is recommended that PPCB shall take up the matter with MD, PSIEC to handover the plot for construction of CETP for dyeing industries of new focal point, Amritsar by 15.2.2020

15. PPCB shall issue necessary directions under the provision of Water Act, 1974 to the textile dyeing industries located in non designated areas which have no Connectivity with the CETPs (under Constructions) to shift at some suitable location in the designated areas which may have connectivity to these CETPs.

16. All the large scale textile dyeing industries of Ludhiana should upgrade their effluent treatment plants to achieve the standards at par with the standards

prescribed for CETPs for small and medium scale textile industries of Ludhiana by 30.06.2020.

17. The Monitoring Committee in has already directed Municipal Corporations Ludhiana and Jalandhar to provide firm timelines for setting up of ETPs and Biogas Plants for Management of Dairy Waste, which is a big source of contributing high values of BOD, TSS and F.Coli parameters.

    In Ludhiana, 2 dairy complexes exist.

    - One dairy complex is located at Tajpur road, which generate huge quantity of solid waste and about 5 MLD liquid waste. **In order to manage these wastes, no steps have been taken by the Municipal Corporation, Ludhiana.**
    - In dairy complex, Haibowal about 400 TPD animal dung is generated, out of which 180 TPD is given to bio-gas power plant Haibowal. PEDA has already installed bio-gas power plant of capacity 1 MW. It was proposed by PEDA that power plant based on bio-gas shall be operated at capacity 0.5 MW and rest of the bio-gas to be generated using animal dung, shall be converted into CBG, which shall be sold in open market. Besides, liquid effluent about 10 MLD in the form of washings and urine of animal is directly discharged into Budha Nallah. **However, no further steps have been taken to manage the rest of the quantity of cow dung and treatment of the liquid waste.**

    - In Jalandhar, 1 dairy Complex located at Jamsher, generates wastewater about 5 MLD. ETP of capacity 5 MLD has been proposed to be installed. A bio-gas plant of 1 MW has also been proposed to be installed in the Jamsher Dairy Complex. However, no further steps have been taken to manage cow dung and treatment of the liquid waste.

    The monitoring Committee recommends that the directions may be issued to the Municipal Corporation Ludhiana and Jalandhar to install biogas plant of adequate capacity to manage whole of the animal dung and install effluent treatment plant of adequate capacity to treat liquid waste of the diary complex, Tajpur road, Haibowal (Ludhiana) and Jamsher (Jalandhar) by 31.12.2020.

18. Regarding desilting of Budha Nallah, Department of Water Resources, Govt. of Punjab was directed in the meeting of the Monitoring Committee held on 1.5.2019 at Ludhiana to desilt the Budha Nallah within city area within 2 months. **However, no Progress report has been submitted by the department of Water Resource.**

The Monitoring Committee recommends that the department of Water Resources, Punjab may be directed to desilt the Budha Nallah at the earliest and Action Taken Report be submitted to the Monitoring Committee.

19. Municipal Corporation, Ludhiana should install new STPs to treat 200 MLD gap in sewage treatment as per the latest norms by 31.12.2020.
20. Municipal corporation, Ludhiana should upgrade their existing STPs (466 MLD capacity) to meet with the latest norms by 31.12.2020.
21. The Municipal Corporation Ludhiana should plug all the 16 direct outlets, carrying untreated domestic sewage of Ludhiana City, presently being discharged into Budha Nallah and divert the same to nearby STPs. These outlets should be closed by 30.6.2020.
22. Municipal Corporation Jalandhar shall install new sewage treatment plants for treatment of 100 MLD gap in sewage quantity by 31.12.2020.
23. PPCB shall install Real Time Water Quality Monitoring System (RTWQMS) at the appropriate locations by 28.2.2020.
24. Punjab Pollution Control Board shall carry out the comprehensive study and water audit of Common Effluent Treatment Plant (CETP) based on Zero liquid discharge technology installed at Ludhiana, for small scale electroplating industries of Ludhiana and other areas and shall submit the report to the Chairman, Punjab Pollution control Board for action in the matter under intimation to the Committee. PPCB shall also submit the compliance report w.r.t recommendations made by the Monitoring Committee during its visit to Ludhiana area on 16.08.2019.
25. Punjab Pollution Control Board shall carry out surprise inspection of large scale electroplating industries of Ludhiana to ensure that effluent treatment plants (based on zero liquid discharge technology) installed by these industries should be operated at all the times and effluent from these industries may not be allowed to discharge into sewerage system further leading to Budha Nallah so as to avoid the chances of discharge of toxic heavy metal into river Sutlej. The recovered water from zero liquid discharge technology ETPs should be recycled back into the processes of the industries. The toxic sludge from the ZLD system shall be disposed off to TSDF, Nimbuan.
26. During the 8th meeting of the Monitoring Committee held on 23.12.2019 with the State level officers of concerned departments, it was observed that percentage of non compliance of effluent treatment plants installed by the industries was 22 % and out of these total inspections, 8 inspections have been carried out by SEE but no inspection was carried out by CEE and Chairman.

The Monitoring Committee recommends that Punjab Pollution Control Board shall increase the inspection of industries by way of making surprise inspection and through Environment Protection Squad. The senior level officers should also carry out the inspections of industries.

27. PPCB shall notify pretreatment standards for CETP at the earliest as directed by the Hon'ble NGT vide its order dated 28.2.2019.

28. PPCB has started monitoring of Budha Nallah from September, 2019 onwards. However, the values of BOD,COD, TDS, T-coli & F-coli in Budha Nallah effluent are high and PPCB needs to identify the reasons for high values of these parameters. With regard to values of total chromium, Hexa Chromium, Copper, Zinc, Iron, Led, Nickel, there is improvement in these parameters at the end of Budha Nallah before meeting to River Sutlej. However, PPCB shall continuously keep strong surveillance on the functioning of CETP installed for electroplating industries and proper lifting of effluent from the electroplating industries.

29. The Monitoring of kala Singhian drain conducted during January 2019 to June, 2019 and September, 2019 to December, 2019 indicates that there is a improvement in Kala Singhian Drain effluent w.r.t parameter BOD, COD and TSS (at first four points) and total chromium. However, PPCB shall ensure that all the sewage disposal points into Kala Singhian Drain are closed. It shall also keep strong surveillance on lifting mechanism of effluent from electroplating industries as these industries have joined CETP, Ludhiana. PPCB shall ensure that no electroplating industry shall discharge its effluent into sewerage system or directly into Kala Singhian Drain.

30. The Monitoring of East Bein conducted during January 2019 to June, 2019 and September, 2019 to December, 2019 indicates that there is improvement in East Bein drain effluent w.r.t parameter BOD, COD, TSS, T-coli & F-coli. The heavy metals namely total chromium, Nickel, Copper & lead have not been dedected. The value of zinc is in decreasing order. The value of iron has been found in increasing order.

31. In order to maintain Environment flow in river Sutlej, the Monitoring Committee recommends that the following directions be given to the various departments of State of Punjab.

    - Department of Water Resources and Department of Soil & Water conservation shall identify the area / stretches in the catchment area of river Sutlej for providing check dams / storage tanks for storage of run off / storm water during rainy days and the stored water may be released in regulated way so as to maintain the quality of drains/Nallah/river water at down streams.

- The Municipal Councils / Corporations / Department of Local Govt. shall install STPs to achieve the stringent parameters i.e. BOD : 10 mg/l, so that the resultant value of BOD after mixing with the river water may be nearly 3 mg/l.
- The industries be directed to achieve the stringent parameters i.e. BOD : 10 mg/l. The industries discharging wastewater, having toxic constituents, may not be allowed to discharge their effluent into drains/Nallah/rivers / water bodies. These industries be directed to achieve Zero Liquid Discharge technology.
- The department of water resource has proposal to release 200 cusec water from Sirhind canal into Budha Nallah. The necessary amount has been deposited by PPCB and Municipal Corporation Ludhiana. The department of water resources shall take immediate steps to construct infrastructure to release canal water in Budha Nallah to increase DO, reduce organic parameters and increase its aesthetic value.
- PPCB has placed the order for installation of Real Time Water Quality Monitoring System in Budha Nallah (2) and in river Sutlej (4) and are likely to be installed and commissioned by 31.3.2020.

32. For management of Septage and Faecal sludge, the Monitoring Committee recommends that the Deptt. of Rural Development & Panchayat, Government of Punjab and Municipal Councils of the State may be directed to identify the sources of generation of septage and feacal sludge from rural and urban areas and a comprehensive plan to dispose off these materials in an environmentally sound manner be prepared in a time bound manner. There is need to identify and adopt the low cost technology which could treat the septage and fecal sludge before their discharge into the Environment.
33. Punjab Pollution Control Board and Himachal Pradesh Pollution control Board shall comply with the recommendations made by the Monitoring Committee in the case of each industry/pollution source during its visit to Pathankot, Dasuya, Talwara (Punjab) and Sansarpur Terrace (H.P) on 20.11.2019 and 21.11.2019.
34. Punjab Pollution Control Board shall comply with the recommendations made by the Monitoring Committee in the case of each industry/pollution source during its visit to Jalandhar area on 3.12.2019.
35. All the concerned department of State of Punjab and pollution Control Board shall comply with the recommendations made by the Monitoring Committee during its visit to the drainage system carrying seepage/sludge and treated/untreated sewage of the towns falling in the jurisdiction of District Fazilka, Ferozepur, Faridkot, Moga & Sri Mukatsar Sahib and further culminating

at Fazilka area on 06.01.2020 and meeting with the District level officers of above 5 districts on 07.01.2020.

B) River Beas

1. The sewage treatment plants installed for the towns located in the catchment area of river Beas are regularly being monitored by Punjab Pollution Control Board. The Monitoring data for the period January, 2019 to June, 2019 and September, 2019 to December, 2019 indicate that out of 16 STPs installed in the catchment area of river Beas, 13 STPs (81.25%) are meeting with all parameters. 2 STPs (12.5 %) are not meeting with BOD, TSS and F.coli parameters. 1 STP (6.25 %) is not meeting with BOD and F.coli parameter.

   The Monitoring Committee recommends as under:

   - Municipal Corporations/ Municipal Councils/ PWSSB or any other agency operating the STPs, should operate their STPs as per the operation and maintenance manual prepared by PWSSB.
   - These departments should impart trainings to the Supervisory staff.
   - In order to bring down the F. coli parameter within the norms, adequate dosing of disinfectant with proper disinfectant contact mechanism should be provided.
   - CCTV cameras, OCEMS along with flow meters shall be installed at inflow, outflow and bye-pass of all the STPs and record in this regard may be maintained by the STP operator. These shall be installed by 28.2.2020, failing which environment compensation may be imposed by PPCB on the defaulting STPs.

2. 6 STPs (Kartarpur: 4 MLD, Dhilwan: 2.5 MLD, Kothi Pandita: 2 MLD, Adarsh Nagar: 1.2 MLD, Haiana: 2 MLD and Sultanpur Lodhi:5 MLD) are under planning and funds have been tied up for these STPs. These STPs are likely to be completed by 31.10.2020. Presently these STPs are either at tendering stage or land issues are there.

   Punjab Water Supply & Sewerage Board should take immediate steps to start the construction work of these STPs by 31.1.2020 so that these STPs may be completed by 31.12.2020.

3. 4 STPs (Talwara: 4 MLD, Sujanpur: 2 MLD, Sujanpur: 3.5 MLD and Rawal & Colonies : 3 MLD) are under planning and funds are yet to be tied up.

   Punjab Water Supply & Sewerage Board should make arrangements to arrange funds for these STPs so that these may be completed by 31.12.2020.

4. 5 STPs (Shri Hargobind Pur: 1 MLD, Dasuya: 4 MLD, Sham Chaurasi: 1 MLD, Bhulath : 4 MLD and Kapurthala : 25 MLD) are required technology upgradation but the funds have not been tied up so far.

   Punjab Water Supply & Sewerage Board should make arrangements to arrange funds for technologically upgradation these STPs so that these STPs may be technologically upgraded by 31.12.2020.

5. The data provided by PWSSB indicated that there is gap in sewage quantity quantity of towns: Haryana (2 MLD), Talawara (4 MLD), kartarpur (4 MLD), Dhilwan (2.5 MLD), Kapurthala (3MLD), Sultanpur Lodhi (5 MLD), Sujanpur (5.5 MLD) and Pathankot (3.2 MLD). Thus, there is total gap in sewage quantity to be treated is 29.2 MLD for which immediate steps may be taken by the department of Local Government/Punjab Water Supply Sewerage Board to make arrangement of funds for installation of STPs.

6. For utilization of treated sewage of the towns, irrigation projects for 11 towns have been completed and commissioned.

   The Department of Soil and Water Conservation should lay irrigation network for utilization of treated sewage of the remaining towns for which STPs have been completed by 31.12.2020.

7. For 7 towns (Pathankot: 27 MLD, Tanda: 4 MLD, GE, Air Force: 3 MLD, GE, South: 2 MLD, GE, West: 2 MLD, GE, Mammon: 2 MLD and GE, North: 2 MLD), irrigation projects for utilization of treated sewage have been prepared but the funds have not been tied up.

   The Department of Soil and Water Conservation should arrangement of funds and lay irrigation network, for utilization of treated sewage of the 7 towns for which STPs have been completed, by 31.12.2020.

8. For 2 villages (Bhadas :300 KLD, District Kapurthala and Chawa: 120, District Gurdaspur) STPs have been completed and for the 3 villages (Gurdwara Ghallu Ghara: 50 KLD, District Gurdaspur, Bham: 615 KLD, District Gurdaspur and Kiri Afgana: 299 KLD, District Gurdaspur), STPs are under construction.

   The department of Rural Development & Panchayat shall complete STPs in these 3 villages by 30.6.2020.

9. The Department of Rural Development & Panchayat has taken 35 villages for treatment of their sewerage in Phase-II. However, nothing has been mentioned about the arrangement of funds and date of completion of STPs. Similarly, in Phase-III, 35 more villages have been selected for installation of STPs but nothing has been mentioned about the arrangement of funds and date of completion of STPs.

The Department of Rural Development Panchayat shall prepare the DPR and shall make arrangements of funds for installation of STPs for these 70 (35+35) villages.

10. Water quality of river Beas at various points as monitored during the period January, 2019 to June, 2019 and September, 2019 to December, 2019, w.r.t parameters DO, BOD and F.coli indicate that water quality of river Beas is class 'B' as per the water quality criteria prescribed by CPCB.

11. Parameters BOD, COD, TSS and F.coli were monitored at various points of Holy Bein and data indicate that the values of BOD, COD, TSS and F.coli in the month of January to June, 2019 vary between 2.5-5.4 mg/l, 17-30 mg/l, 18-31 mg/l, 195-427 MPM/100 ml. In the month of September-December, 2019 these values were observed as BOD: 2.6-6.0 mg/l, COD: 17-32 mg/l, TSS: 21-32mg/l, F.coli: 175-220 MPM/100 ml. As per data, the water quality of Holy Bein is class B to C.

12. To maintain the Environment flow and to restore the quality of river Beas, the following recommendations are made:

    i. Department of Water Resources and Department of Soil & Water conservation shall identify the areas / stretches in the catchment area of river Beas for providing check dams / storage tanks for storage of run off / storm water during rainy days and the stored water may be released in regulated way so as to maintain its quality at down streams.

    ii. The Municipal Councils / Corporations / Department of Local Govt. shall install STPs to achieve the stringent parameters i.e. BOD : 10 mg/l, so that the resultant value of BOD after mixing with the river water may be nearly 3 mg/l.

    iii. Industries be directed to achieve the stringent parameters i.e. BOD : 10 mg/l. The industries discharging wastewater having toxic constituents, may not be allowed to discharge their effluent into Rivers / water bodies. These industries be directed to achieve Zero Liquid Discharge (ZLD) technology.

    iv. PPCB has placed the order for installation of Real Time Water Quality Monitoring System in river Beas at one location and shall be installed and commissioned by 31.3.2020.

13. For Septage and Faecal sludge management, the Monitoring Committee recommends that the Deptt. of Rural Development & Panchayat, Government of Punjab and Municipal Councils of the State may be directed to identify the sources of generation of septage and feacal sludge from rural and urban areas and a comprehensive plan to dispose off these materials in an environmentally sound manner be prepared in a time bound manner. There is need to identify

and adopt the low cost technology which could treat the septage and fecal sludge before their discharge into the Environment.

Sant Balbir Singh Seechewal **J. Chandra Babu** **Dr. Babu Ram**

S C Agrawal

Justice Jasbir Singh,
Former Judge, Punjab and Haryana High Court now as Chairman of the Monitoring Committee

Annexure-1

Item No. 01 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 916/2018
(Earlier O.A. No. 101/2014)

(With report dated 29.10.2019)

Sobha Singh & Ors. Applicant(s)

Versus

State of Punjab & Ors. Respondent(s)

Date of hearing: 06.12.2019
Date of uploading: 12.12.2019

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

ORDER

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I. Introduction – The issue and the background on the subject of pollution of rivers Satluj and Beas in the State of Punjab:

1. This order may be read in continuation of order dated 16.07.2019. Issue for consideration is pollution of Rivers Satluj and Beas in the State of Punjab and other incidental and allied matters. The subject has been dealt with by this Tribunal in the last five years on several occasions. Background has been elaborately set out in the order dated 24.07.2018. Main sources of pollution are discharge of untreated industrial effluents by industries, discharge of untreated municipal sewage as well as solid or other waste disposal either directly in the said rivers or in the drains or the tributaries of the said rivers.

2. River Satluj also finds mention in the identified polluted river stretches based on data compiled by Central Pollution Control Board (CPCB) which issue is being dealt with separately in O.A. No. 673/2018 to which reference will be made later.

II. Order of this Tribunal dated 24.07.2018 constituting a Committee to prepare time bound action plan for control of

pollution and ensuring the quality of the water as per bathing standards:

3. Vide order dated 24.07.2018, this Tribunal directed the CPCB to constitute a Monitoring Committee with representatives from the Pollution Control Boards of Punjab and Rajasthan and Mr. Balbir Singh Seechewal, a volunteer and to prepare a time bound action plan to be put on the website. Involvement of stake holders was to be sought, apart from undertaking awareness programs.

III. Report of the Committee and order dated 14.11.2018:

4. The report of the Committee which was taken up for consideration vide order dated 14.11.2018 showed huge amount of uncontrolled pollution on account of lack of sewage treatment systems, non-availability of STPs or other appropriate waste water treatment facilities, lack of skilled man power, non-sustainable approach in designing sewage management project which resulted in damage to the health of the inhabitants and the environment.

5. Having regard to the magnitude of the damage and failure of governance in handling the situation, the Tribunal directed the State of Punjab to deposit a sum of Rs. 50 Crores for restoration of the environment which could be recovered from the erring local bodies/officers/individual.

IV. Order of this Tribunal dated 16.01.2019 in O.A. No. 606/2018 requiring the presence of Chief Secretaries of all the States/UTs to appear before this Tribunal after acquainting themselves with the important environmental issues including control of pollution of the polluted river stretches:

6. Vide order dated 16.01.2019 in O.A. No. 606/2018 while dealing with the issue of Solid Waste Management, this Tribunal directed personal appearance of the Chief Secretaries after acquainting themselves with significant environmental issues mentioned therein, including the issue of polluted river stretches in their States/UTs. Accordingly, the Chief Secretaries appeared, interacted with the Tribunal and undertook to take further remedial steps. They have to file further reports and appear again on the dates fixed.

V. Further reports of the Committee dated 21.1.2019 and 30.01.2019 and order of this Tribunal dated 28.02.2019 and directing modification of the Committee to be headed by former Judge of Punjab and Haryana High Court to oversee the execution of the action for control of pollution:

7. Further reports dated 21.01.2019 and 30.01.2019 were filed by the CPCB in respect of restoration of the rivers in question in the present case which were taken up for consideration on the last date of hearing i.e. 28.02.2019. The reports considered the action plan of the State of Punjab which was furnished in pursuance of orders of this Tribunal dated 20.09.2018 and 19.12.2018 in *Original Application No.673 of 2018, News item published in "The Hindu" authored by Shri Jacob Koshy Titled "More river stretches are not critically polluted: CPCB"*. In view of continuing pollution and highly inadequate steps for remedying the situation, this Tribunal directed that the Monitoring Committee earlier constituted may now be headed by a former Judge of Punjab and Haryana High Court. A former Chief Secretary of Punjab and a former Member Secretary of Punjab PCB were directed to be included as Members. The Tribunal

suggested two Senior IAS officers named in the order, whose contribution in the field of environment was well acknowledged, could be involved in a suitable manner. The Committee was to oversee the remedial measures and also consider closure of polluting activities, prosecution of the polluters and recovery of compensation for damaging the environment, apart from recommending disciplinary and penal action against the erring officers. The Tribunal also suggested that the State Government should record failure of individual officers in the ACRs.

VI. Report of the Committee dated 12.06.2019 and order of this Tribunal dated 16.07.2019:

8. The matter was considered on 16.07.2019 in light of the report dated 12.06.2019 furnished by the Monitoring Committee making following recommendations:-

*"**Harikelake***

i) Data at the entry point of river in Punjab indicated that water quality was Class B but at the downstream in the State at Harikelake the water quality deteriorated to Class C. The degradation was due to discharge of sewage of the towns and the industrial effluents. The Committee recommended installations of 7 online continuous monitoring stations at appropriate locations.

ii) Out of 53 STPs monitored by the Committee in January, 2019, 30 were not achieving the norms for which remedial measures were suggested.

iii) CETP for leather complex at Jalandhar was not achieving the norms.

iv) ETPs installed by the industries were not being inspected by senior level officers. The Committee suggested that 15% of the industries should be inspected by senior level officer of the PPCB.

v) The industries in proximity of the water bodies must be selected for inspection having regard to quantity of effluent and toxicity of effluents.

vi) The Committee suggested that the State Government should review the action plan for new STPs and

upgradation of existing STPs, particularly, in the catchment areas of the rivers.

vii) *The Municipal Corporation, Ludhiana should finalize firm timelines for the ETPs and bio-gas plants for treatment of dairy effluents. The Committee suggested that treated waste water be utilized for irrigation.*

viii) *CCTV cameras be installed to check dumping of solid waste into the Budha Nallah Drain.*

Budha Nallah

i) *STP at Jamalpur was not in operation and the officers of Municipal Corporation, Ludhiana informed that this STP is lying defunct and non- functional.*

ii) *The waste water from Dairy complex, Tajpur road (5 MLD) is discharged into Budha Nallah without any treatment.*

iii) *Lot of discharge of waste water(60 MLD) coming from Transport Nagar was found entering into Budha Nallah.*

iv) *STP at Bhattian with the capacity of 111 MLD was not performing satisfactorily, as the treated sewage was found to be black in color.*

v) *Both the STPs at Balloke were not performing satisfactorily as the color of the treated sewage was quite black in color.*

vi) *Liquid effluent (10 MLD) in the form of washings and urine of animals is directly discharged into Budha Nallah from Dairy Complex, Haibowal.*

STP at Ludhiana

i) *The Municipal Corporation, Ludhiana should rehabilitate the STP based on appropriate technology and sewage flow entering into STP in view of future increase in discharge due to growth in population.*

ii) *Municipal Corporation Ludhiana shall prepare concrete and firm proposal for treatment of wastewater from Dairy Complex, Tajpur Road. In case, these dairies are to be shifted to designated area, the firm timelines must be submitted so that the discharge from these dairies may be cut off from entering into Buddha Nallah.*

iii) *With respect to CETP, Bahadurke Road, Ludhiana to treat the effluent of 23 dyeing industries, 1.5 MLD CETP is under construction. The committee desired that the CETP must be completed by 30.06.2019.*

Holy Bein

i) *Punjab Pollution Control Board shall issue directions under the provisions of Water (Prevention & Control of Pollution) Act, 1974 to the Department of Local Govt. to de-sludge the ponds of the STP, Sultanpur Lodhi and to replace 02 no. lifting pump with new one to lift the sewage to the STP within 02 months.*

ii) *Department of Rural Development &Panchayat be directed to make the pumping system operational so as to carry the sewage of Village Kheda Donna to the pond provided to treat the sewage and utilize the same for irrigation and plug the outlet into holy Bein.*

iii) *Department of Local Govt. be directed to ask Municipal Council, Kapurthala to operate the existing STP regularly and efficiently and no effluent should be bypassed. The treated sewage should be utilized for irrigation and no leading to Holy Bein. The necessary upgradation in ETP shall be made within the time schedule as mentioned in the Action Plan "Clean River Sutlej."*

iv) *PPCB shall issue directions to Jalandhar Development Authority to arrange suitable chunk of land for installation of STP to treat the sewage of Rawal and its Colonies as it a major source of pollution in Holy Bein and it may be directed to install STP within 06 months.*

v) *Department of Local Govt. be directed to ask the Municipal Council Kapurthala to disconnect the outlets of some localities of Kapurthala town falling into Wadala Drain and same should be diverted to main sewerage system leading to STP.*

CETP Jalandhar

i) *PPCB shall issue directions under the provisions of the Water Act, 1974 to Punjab Effluent Treatment Society (PETS) to upgrade the CETP within the time schedule as mentioned in the Action Plan prepared by the State Government, Department of Environment to achieve all the parameters within the prescribed limits.*

ii) *PPCB shall get performance guarantee of Rs. 25 Lakh from PETS for effective operation of equipments to be installed for upgradation of existing CETP to ensure the achievement of standards as prescribed by the Board.*

iii) *PPCB shall issue directions under the provisions of the Water Act, 1974 to PETS to install and commission the following systems within one month for effective monitoring of CETP.*

a. *Electromagnetic flow meter at the outlet of CETP.*
b. *pH measuring sensor to be installed in OCEMS.*
c. *Connectivity of OCEMS with CPCB and PPCB servers.*
d. *To ensure regular lifting of sludge from CETP and to send it to TSDF Nimbua.*

iv) *PPCB shall issue directions under the provisions of the Water Act 1974 to PSIEC to disconnect all the outlets of storm water drain from Kala Singhian drain, presently carrying Sewage of Leather Complex, into said drain within 15 days. These outlets shall only be operated during rainy season in the presence of officials of PPCB.*

v) *PPCB shall lay down primary effluent treatment plant standards of waste water to be further treated into common effluent treatment plant within 15 days.*

vi) *Municipal Corporation Jalandhar shall close outlet maintained near STP Peer Daad to discharge untreated sewage into Kala Singhian drain within 15 days.*

Municipal Solid Waste Management at SBS Nagar, STPs at SBS Nagar

9. Recommendations of the Committee were noted as follows:-

"It was noted that M/s Punjab Alkalies & Chemical Ltd., Naya Nangal, Distt. Roopnagar claimed to be utilizing RO reject water for irrigation while such water must be taken to Multi Effect Evaporator and dried sludge to be taken to the TSDF site. Observations have also been to withstand the deficiencies in the STP installed by the Punjab Water Supply & Sewerage Board (PWSSB). It was found that a bye-pass drain carrying untreated sewage mixed with treated sewage was being taken to the River Satluj and the Committee was misled in that regard by the Executive Engineer of PWSSB. Deficiencies were noticed in the operation of the STP by the authorities of the BBMB. There was need for effective monitoring of functioning of CETP by having suitable mobile application and GPS system as well as functioning of ETPs installed by the industries. Having regard to the facts ascertained on personal visit, the Committee required that the State PCB should take action against the Municipal Corporation, Ludhiana, Punjab Dyers Association, Ludhiana for unauthorizedly discharging effluents directly into the BudhaNalla. Action was also directed against Assistant Environmental Engineer looking after Tajpur Road for not reporting unauthorized outlet into the Budha Nallah. The Municipal Corporation was to remove all the outlets carrying effluents directly into the Budha Nallah. The Committee directed that the STPs of the Municipal Council be monitored by the State PCB. The Committee visited STP at Budha Nallah at Bhamian Kalan, Ludhiana, Sewage Treatment Plant at Jamalpur, Dairy Complex, Tajpur Road, Ludhiana, Transport Nagar Near Durdwara Gaughat, CETP, Bahadurke Road, Ludhiana, Qasabad and STP at Bhattian, STP at Balloke, Disposal of effluent from Dairy Complex, Haibowal into BudhaNallah and Bio-gas Plant, Haibowal, BudhaNallah at Barnhara Bridge, Confluence point of BudhaNallah with River Satlej, disposal points of sewage of focal point, Jalandhar, second disposal point near M/s Jagran Prakashan Ltd. The Committee visited various industries such as M/s Vishal Tool& Forging Pvt. Ltd, M/s Proxima Steel Forge Pvt. Ltd, M/s Talbro Forging, M/s Doaba Co-operative, The Doaba Cooperative Milk Producers Union Ltd, G.T Road, bye-pass, Jalandhar. Disposal of sewage of Kalia colony, Jalandhar, Disposal points near SabjiMandi, Maqsudan Road, Jalandhar, disposal points of industrial area, Jalandhar, CETP at Leather Complex, Jalandhar, M/s Jay Dee Leather Pvt. Ltd, Plot No. 28, and 29, Leather Complex, Jalandhar, STP Pholriwal, STPs, sewage/sullage disposal points into drains leading to Holy Bein (Kali Bein or West Bein), disposal of sewage/sullage of Village Kheda Donna into

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Holy Bein, STP Kapurthala, Bhulana Drain leading to Holy Bein, disposal point into Wadala Drain leading to Holy Bein."

10. Further recommendations of the Committee were:-

1) The observations of the Monitoring Committee with regard to the STPs and industries be conveyed to PPCB, PWSSB, BBMB and M.C Naya Nangal for further immediate action in the matter.

2) PWSSB authorities be asked to issue show cause notice to Sh. Rahul Kaushal, Executive Engineer and Sh. Tarun Gupta, Sub Divisional Engineer for misleading the Committee about bye pass drain, carrying untreated sewage, leading to river Sutlej.

3) BBMB authorities be asked to issue advisory letters to Sh. Manvinderpal Singh, Executive Engineer and Sh. Sukhdev Singh, Sub Divisional Engineer regarding irregular operation and non maintenance of STP and worst condition of sludge drying beds, which were not found used for the last so many days, because these sludge drying beds were found full of wild grass."

11. The reports were accepted as follows:-

"Learned counsel for the State of Punjab, Punjab State PCB and Municipal Corporation, Ludhiana suggest that the reports be accepted being based on objective data. We are satisfied that the report of the Committee needs to be implemented fully in letter and spirit. We place on record our gratitude for the massive work undertaken by the Committee. On that basis, in compliance of established environmental principles, identified polluting activities must be stopped/suspended till the norms are met, identified polluters prosecuted and compensation for damage to the environment and public health recovered which should be adequate to meet the cost of restitution and deterrent. Wherever possible, the following formula evolved by the CPCB may be followed for assessing such compensation:

EC = (PI ×N ×R ×S ×LF)
Where, EC is Environmental Compensation in ₹
PI = Pollution Index of industrial sector
N = Number of days of violation took place
R = A factor in Rupees (Rs) for EC
S = Factor for scale of operation
LF = Location factor

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The formula has been quoted and discussed in order of this Tribunal dated 13.05.2019 in O.A No. Original Application No. 95/2018, Aryavart Foundation v. M/s Vapi Green Enviro Ltd. & Ors.[1]

The deterrence element should be followed where the default is continuing. Compensation need not be limited to the day on which default is found but should go back to preceding five years unless the polluter establishes that in the past such pollution was not taking place. For doing so, the principle of 'best judgment assessment' ought to be followed by the authority assessing such compensation. The compensation suggested by the Committee in its report may be treated as tentative and on that basis the Pollution Control Board may pass appropriate orders, after following the due procedure of law. It will be open to the State Pollution Control Board to pass an interim order, pending procedure being followed, if the material on record warrants recovery of interim compensation. The State PCB may give a report of the action taken for information of the Committee and may be forwarded to this Tribunal for further orders, wherever necessary.

The next report of the Committee may be in cumulative terms consolidating its conclusions, giving the earlier status, the current status and the recommendations at one place in a tabulated form. Further report may be furnished after three months but before 30.11.2019 at judicial-ngt@gov.in."

12. After noticing the status report furnished in the report with regard to STPs not achieving the norms, need for monitoring stations at appropriate locations, need for inspection of ETPs particularly in respect of industries in the proximity of water bodies, finalization of timelines for treatment equipments, CCTV cameras to check dumping of waste, specific observations with regard to Budda Nalah and Holy Bein, CETP at Jalandhar, waste management and STPs at S.B.S. Nagar, Kalasinghia drain, violations by specified industries and local bodies, misconduct of certain officers, this Tribunal directed the report be implemented fully in letter and spirit. The Tribunal directed that identified polluting activities be stopped

[1]The 'Polluter Pays' principle requires the polluter to pay for the entire period of pollution which needs to be assessed in every individual case in the light of circumstantial evidence and the probabilities.

and compensations recovered from the identified polluters. The compensation may go back upto five years based on assessment of the period for which violation took place. The PCB may recover compensation after following due procedure lf law and give an action taken report to the Committee.

VII. Order dated 01.10.2019 modifying the constitution of the Committee and substituting the Chairman of the Committee by Justice Jasbir Singh, former Judge of the Punjab and Haryana High Court:

13. The constitution of the Committee was modified for the reasons mentioned in the order dated 01.10.2019 to the effect that the Committee will now be headed by Justice Jasbir Singh, former Judge of the Punjab and Haryana High Court in place of Justice Pritam Pal, former Judge of the Punjab and Haryana High Court.

VIII. Order of this Tribunal dated 22.11.2019 in O.A. No. 138/2016 dealing with the issue of control of pollution of river Ghagar:

14. We may also refer to order dated 22.11.2019 in O.A. No. 138/2016 to dealing with the control of pollution of river Ghaggar wherein following directions have been issued:-

> *"(i) All the concerned States/UT relevant for River Ghaggar must ensure installation of STPs within the planned timelines subject to the rider that where the timelines goes beyond 31.12.2020, the timeline will be treated to be 31.12.2020. Wherever timeline already laid down by the State/UT is exceeded, compensation will be payable @ Rs 10lakh/month per STP till commissioning of STPs. This scale of compensation will also apply, in respect of STPs for which timeline for construction of STP is beyond 31.12.2020, from 01.01.2021. The STPs must conform to the laid down standards and connected to the sewerage network with a view to achieve the object of setting up of such STPs.*

(ii) Let the concerned SPCBs/PCC take steps in terms of observations of the Committee after considering the response of the alleged polluters. If the Committee observes that SPCBs/PCC has not taken necessary and adequate action, report be given to this Tribunal.

(iii) Local bodies in the catchment area may ensure that solid waste is not dumped into the river or its tributaries which aspect may be monitored by the Committee also.

(iv) Future functioning of the Committee will be in terms of clarification as per para 21 above. Incidental issues stands disposed of in terms of para 22 above.

(v) Let steps be taken by concerned States/UTs in terms of the recommendations and for compliance of direction for connecting the drains to the STPs wherever feasible and till then in-situ remediation in terms of para 20 above.

(vi) The Chairmen, Member Secretaries of SPCBs/PCC, Secretaries Urban Development and Secretaries Irrigation and Public Health of the four States/ UT and nodal officer of CPCB may remain present in person for the assistance of the Tribunal so that comprehensive review of progress can be undertaken."

IX. Order of this Tribunal dated 06.12.2019 in connected matters dealing with pollution of 351 river stretches – O.A. No. 673/2018 on the subject of preparation and execution of action plan for control of pollution of polluted river stretches:

15. We may also refer to order dated 06.12.2019 in O.A. No. 673/2018, wherein following directions have been issued:-

"(i) *100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 atleast to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP.*

(ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

(iii) We further direct that an institutional mechanism be evolved for ensuring compliance of above directions. For this purpose, monitoring may be done by the Chief Secretaries of all the States/UTs at State level and at National level by the Secretary, Ministry of Jal Shakti with the assistance of NMCG and CPCB.

(iv) For above purpose, a meeting at central level must be held with the Chief Secretaries of all the States/UTs atleast once in a month (option of video conferencing facility is open) to take stock of the progress and to plan further action. NMCG will be the nodal agency for compliance who may take assistance of CPCB and may give its quarterly report to this Tribunal commencing 01.04.2020.

(v) The Chief Secretaries may set up appropriate monitoring mechanism at State level specifying accountability of nodal authorities not below the Secretary level and ensuring appropriate adverse entries in the ACRs of erring officers. Monitoring at State level must take place on fortnightly basis and record of progress maintained. The Chief Secretaries may have an accountable person attached in his office for this purpose.

(vi) Monthly progress report may be furnished by the States/UTs to Secretary, Ministry of Jal Shakti with a copy to CPCB. Any default must be visited with serious consequences at every level, including initiation of prosecution, disciplinary action and entries in ACRs of the erring officers.

(vii) As already mentioned, procedures for DPRs/tender process needs to be shortened and if found viable business model developed at central/state level.

(viii) Wherever work is awarded to any contractor, performance guarantee must be taken in above terms.

(ix) CPCB may finalize its recommendations for action plans relating to P-III and P-IV as has been done for P-I and P-II on or before 31.03.2020. This will not be a ground to delay the execution of the action plans prepared by the States which may start forthwith, if not already started."

X. Report of Committee dated 29.10.2019 and consideration thereof:

16. Further report dated 29.10.2019 has been filed by the Committee with reference to:

i. Monitoring of functioning of existing STPs.

ii. Functioning of CETPs.

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iii. Monitoring of ETPs.

iv. Setting up of new and up gradation of STPs.

v. Setting up of ETP plan for dairy waste.

vi. Reconciliation of waste water and industrial effluents of Ludhiyana.

vii. Release of fresh water in Budha Nallla and Holy Bein.

viii. Reuse of treated water for irrigation.

ix. Preventing dumping of Solid Waste.

x. Treatment facilities in villages.

xi. Shifting of dying industries.

xii. Organizing health checkups.

xiii. Direct discharges into drains.

17. The report on above subjects is as follows:

"

(a) Monitoring of functioning of STPs:

The monitoring committee observed that PPCB has monitored 77 STPs out of total 86 STPs during the month of July, 2019. Out of these 77 STPs, 31 STPs have been found non-compliant. However, the %age of non-compliance has decreased during the last 6 months due to effective monitoring and improvement in the operating agencies of STPs. Monitoring Committee directed as under:

- *Concerted efforts may be made by all the concerned Departments to bring down the non-compliance of STPs to significantly low level.*
- *OCEMS along with flow meter shall be installed at inflow, outflow and bye-pass of the STPs and record in this regard may be maintained by the STP operator.*
- *OCEMS and CCTV cameras on all the STPs may be ensured to be installed by 30/11/2019, failing which environment compensation shall be imposed on the defaulting STPs.*

*(Para **2.5.2 of the report**)*

(b) Functioning of CETPs:

With regard to continuous failure of CETP, Leather Complex, Jalandhar to achieve the prescribed standards, PPCB informed that a penalty of Rs. 25 lacs has been imposed on CETP, Leather Complex on account of non-compliance and 3 complaints under the provisions of Water Act, 1974 have been filed in the court of law.

PPCB further informed that pre-treatment standards have been prepared and put up in the Board meeting. The monitoring committee directed as under:

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- *Pre-treatment standards be notified at the earliest as directed by Hon'ble NGT.*
- *OCEMS be installed at CETP Leather Complex, Jalandhar for its effective monitoring.*

(Para 2.5.3 of the report)

(c) Monitoring of functioning of ETPs:

It was observed by the committee that the number of inspections of industries made by PPCB was very less and the number of inspections are not inconsonance with the laid down guidelines of PPCB. Only one inspection has been carried out by Chief Environmental Engineer, but none by Chairman, PPCB.

The Chairman of the Monitoring Committee pointed out in the meeting that during field visits, it has been observed by the Committee that there is no improvement w.r.t. industrial pollution and regulatory agency is not taking effective action. PPCB must take the responsibility for effective check on non-compliance by industries. The monitoring committee further directed that the explanation of Environmental Engineer and Asstt. Environmental Engineer, in whose jurisdiction the committee found the non-compliance, shall be called and responsibility be fixed. The committee further directed that "polluters pays" principle be strictly implemented and environment compensation be imposed in accordance with the orders dated 16/7/2019 of Hon'ble NGT in the case of Sobha Singh Vs State of Punjab & others.
(Para 2.5.4 of the report)

(d) New / upgradation / rehabilitation of STPs:

The Monitoring Committee observed that the progress of setting up of 3 new STP's by Municipal Corporation Jalandhar is slow for which they said Corporation has claimed that DPRs are currently under review at PMIDC Level. The Committee directed Municipal Corporation, Jalandhar to expedite the work as per the timelines given in the Action Plan.

Further, the monitoring committee directed the Dept. of Local Government / PWSSB to install all the STPs within the time schedule as mentioned in the Action Plan already submitted before Hon'ble NGT.
(Para 2.5.5 of the report)

(e) Setting up of New CETPs:

The Monitoring Committee observed that 15 MLD CETP for BahadurKe Road Textile dyeing industries cluster at Ludhiana was to be commissioned by 30.06.2019 but the same has not been commissioned so far. PPCB reported

that environmental compensation has been imposed on SPV with effect from 01.07.2019 and 15 MLD CETP shall be made functional within 3 months.

For installation of 50 MLD and 40 MLD CETPs for dyeing industries of Tajpur Road, Rahon road and Focal Point Ludhiana, PPCB has issued directions under section 33 of Water Act, 1974 and PPCB shall impose environment compensation on SPV's as per Action Plan.

Monitoring Committee directed that PPCB shall ensure that it will put a dedicated team exclusively for monitoring the progress and resolving and escalating the issue of CETP's on day to day basis.
(Para 2.5.6 of the report)

(f) Setting up of ETP's/Biogas Plants for Dairy Waste:

The Monitoring Committee directed Municipal Corporation Ludhiana and Jalandhar to provide firm timelines for setting up of ETP's and Biogas Plants for Management of Dairy Waste. Municipal Corporation Ludhiana was further directed to send a written communication to Punjab Energy Development Agency (PEDA) regarding the decision of not shifting the dairies and setting up of Biogas Plants at Tajpur Road Dairy Complex.
(Para 2.5.7 of the report)

(g) Release of 200 Cusecs of water to Budha Nallah:

Department of Water Resources claimed that project for release of 200 cusecs of water into Budha Nallah shall be completed within one year after the release of the funds.
(Para 2.5.8 of the report)

(h) Release of 150 Cusecs of water from Mukerian Hydel Channel to Holy Bein:

Department of Water Resources reported that necessary funds amounting to Rs. 2.5 Crores have been approved by Govt. of Punjab and project would be completed by 15.10.2019
(Para 2.5.9 of the report)

9.0 Earlier and current status of performance of existing sewage treatment plants (STPs), utilization of treated sewage for irrigation, treatment of sewage of villages, water quality of drains/Nallahs and river Sutlej and Beas, gaps in quantity of sewage to be treated.

(i) River Sutlej

<u>Status of sewage treatment plants installed for the towns</u>

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Sr. No	Name of STP	Installed Capacity (MLD)
1	Goniana	3
2	Jalalabad (DWSS)	8
3	Abohar (AMRUT)	25
4	Makhu	4
5	Talwandi Bhai	4
6	Zira	8
7	Hoshiarpur	30
8	Jalandhar	100
9	Jalandhar (Pholriwal-I)	25
10	Jalandhar (Pir Dad)	50
11	Jalandhar	25
12	Jalandhar (Jaitewali)	25
13	Jalandhar (Bambianwali)	10
14	Nakodar	6
15	Phillaur (South)	2.6
16	Phillaur (South)	3
17	Phagwara (North)	20
18	Phagwara (South)	8
19	Phagwara (North)	8
20	Jagraon	16
21	Jagraon	12
22	Ludhiana (Balloke)	152
23	Ludhiana (Bhattian)	111
24	Ludhiana (Jamalpur)	48
25	Ludhiana (Bhattian)	50
26	Ludhiana (Balloke)	105
27	Machhiwara	4
28	Sahnewal	7
29	Moga	27
30	Dharamkot	4
31	Bagha Purana (DWSS)	3.8
32	Shri Mukatsar sahib (DWSS)	8.7
33	Shri Mukatsar sahib (DWSS)	5.7
34	Shri Mukatsar sahib (DWSS)	3.5

35	Malout	3
36	Malout	10
37	Banga	3
38	Nawanshahar	6
39	Morinda	5.5
40	Nangal	8
41	Nangal	5
42	Anandpur Sahib (DWSS)	8
43	Ropar	10
44	Ropar	2.5
45	Ropar	2
46	Kurali (GMADA)	5
47	Jaito	6
48	Ferozepur	18
	Total	1014.3

(Para 9.1 of the report)

(j) Status of STPs under construction:

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/comm issioning	% work done	
				Earlier status as on 31/12/2018 (% work done)	Current status as on 30/9/2019 (% work done)
1.	Guru Har Sahai	4	31.03.2020	1	2
2.	Guru Har Sahai	1	31.03.2020	1	2
3.	Kotkapura	8	30.11.19	62	75
4.	Kotkapura	6	30.11.19	60	73
5.	Gidderbaha	7	31.3.2021	-	Completed. Electric connection under progress.
	Total	26			

(Para 9.1.5 of the report)

(k) Status of STPs under planning and funds tied up:

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion /comm issioning	Current status as on 30.9.2019

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1.	Balachaur	4	31.10.2020	Tender called. To be opened on 3.10.2019
2.	Gharshankar	3	31.10.2020	Tender called. To be opened on 23.10.2019
3.	Maluka	1	31.10.2020	DNIT is being revised as per new eligibility criteria.
4.	Rahon	3	31.10.2020	Tender called. To be opened on 23.10.2019
5.	Faridkot	14	Land issue to be resolved	STP land — Price fixation done on 29.6.2019. Final approval of payment under approval. Land for approach road —Social Impact Assessment Study is being conducted.
6.	Patti	8	Land issue to be resolved	Advertisement given on 9.7.2019. No application received. Advertisement process will be again initiated.
7.	Jalandhar	100	-	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.
8.	Ludhiana	200	-	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.
9.	Raikot	7	30.10.2020	Tender not received two times. Third time, corrigendum issued and now to be opened on 30.10.19
10.	Ferozepur	1	-	Land not available.
11.	Sri Mukatsar Sahib	10	-	Funds tied up in AMRUT. DNIT approval under process.
12.	Kiratpur Sahib	2	03.11.2021	DNIT under preparation.
	Total	353		

(Para 9.1.6 of the report)

(l) STPs under planning but funds yet to be tied up

Sr. no.	Name of the town	STP Capacity	Current status as on 30.9.2019
1.	Bhagta Bhaika	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.

2.	Bhai Roopa	4	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
3.	Kotha Guru	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
4.	Arniwala	2	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
5.	Malian Wala	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
6.	Mamdot	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
7.	Mudki	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
8.	Mahilpur	2	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
9.	Nihal Singh Wala	3	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
10.	Barriwala	2	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
	Total	28	

(Para 9.1.7 of the report)

(m) STPs which require technologically upgradation and funds tied up:

Sr. no.	Name of the town	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date for completion/ commissioning	Current status as on 30.9.2019
1.	Jalandhar (1 STP)	235	100	No target date given	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.

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2.	Ludhiana (5 no. STPs)	466	466	No target date given	DPR under preparation. Funds tied up in AMRUT and Smart City Scheme, State share yet to be arranged.
	Total	701	566		

(Para 9.1.8 of the report)

(n) Gaps in treatment of sewage of the towns located on river Sutlej:

Sr. No	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1.	Bhagta Bhaika	3	0	3
2.	Bhai Roopa	4	0	4
3.	Goniana	3	3	0
4.	Kotha Guru	3	0	3
5.	Maluka	1	0	1
6.	Faridkot	14	0	14
7.	Jaito	6	6	0
8.	Kotkapura	14	8	0
			6	
9.	Arniwala	2	0	2
10.	Jalalabad (DWSS)	8	8	0
11.	Abohar (AMRUT)	25	25	0
12.	Ferozepur	19	18	1
13.	Guru Harsahai	5	4	0
			1	
14.	Makhu	4	4	0
15.	Malian Wala	3	0	3
16.	Mamdot	3	0	3
17.	Mudki	3	0	3
18.	Talwandi Bhai	4	4	0
19.	Zira	8	8	0
20.	Hoshiarpur	30	30	0
21.	Garhshankar	3	0	3
22.	Mahilpur	2	0	2
23.	Jalandhar	335	100	100
			25	
			50	
			25	

			25	
			10	
24.	Nakodar	6	6	0
25.	Phillaur (South)	5.6	2.6	0
			3	
26.	Phagwara	36	20	0
			8	
			8	
27.	Jagraon	28	16	0
			12	
28.	Ludhiana	666	152	200
			111	
			48	
			50	
			105	
29.	Machhiwara	**4**	**4**	**0**
30.	Raikot	7	0	7
31.	Sahnewal	7	7	0
32.	Moga	27	27	0
33.	Dharamkot	4	4	0
34.	Bagha Purana (DWSS)	3.8	3.8	0
35.	Nihal Singh wala	3	0	3
36.	Barriwala	2	0	2
37.	Gidderbaha	7	7	0
38.	Shri Mukatsar sahib	27.9	8.7	10
			5.7	
			3.5	
39.	Malout	13	3	0
			10	
40.	Balachaur	4		4
41.	Banga	3	3	**0**
42.	Nawanshahar	6	6	0
43.	Rahon	3	0	3
44.	Kiratpur Sahib	2.0	0.0	2
45.	Morinda	5.5	5.5	**0**
46.	Nangal	13.0	8.0	0
			5.0	
47.	Anandpur Sahib (DWSS)	8.0	8.0	0
48.	Ropar	14.5	10.0	0
			2.5	
			2.0	

49.	Kurali (GMADA)	5.0	5.0	0
50.	Patti	8	0	8
	Total	3 1421.	1040.30	381

(Para 9.1.9 of the report)

(o) Treatment of sewage of villages:

The Department of Rural Development and Panchayat has submitted that in the first phase, 75 villages have been selected for treatment of sewage. The status of installation of treatment facilities for these villages is mentioned as under:

(Para 9.1.10 of the report)

(p) Status of CETPs for treatment of effluent of dyeing industries of Ludhiana and effluent of electroplating industries of Jalandhar:

Sr. no.	Project	Target date	Progress upto	Current status as on
1.	Setting up of 15 MLD CETP at Ludhiana	30.6.2019	80 %	93.5 %
2.	Setting up of 40 MLD CETP at Ludhiana	31.8.2019	62 %	40 %
3.	Setting up of 50 MLD CETP at Ludhiana	31.1.2020	20 %	67 %
4.	Up-gradation of 5 MLD CETP and setting up of 6 MLD at leather complex, Jalandhar	No time schedule mentioned	DPR under vetting with CLRI	-
5.	Setting up of 0.15 MLD CETP for electroplating industries of Jalandar	No time schedule mentioned	CETP work was started but due to public resistance, work has been stopped.	As per decisions taken by the Deputy commissioner, Jalandhar, work of CETP shall be started after obtaining necessary permission from the concerned department and with the help of Punjab police.

(Para 9.1.14 of the report)

(q) Identification of new CETPs to treat the effluent from focal points of the State:

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There is need to install the CETP across all the focal points for which department industries has constituted committee.
However, no progress has been submitted by the department.

(Para 9.1.15 of the report)

(r) *Installation of ETPs/Biogas power plant for treatment of dairy wastewater:*

In Ludhiana, 2 dairy complexes located at Tajpur road and Haibowal, generate about 5 MLD and 10 MLD wastewater, respectively, in addition to generation of cow dung.
(Para 9.1.16 of the report)

(s) *In dairy complex at Haibowal:*

In this complex, about 400 TPD animal dung is generated, out of which 180 TPD is given to bio-gas power plant Haibowal. PEDA has already installed bio-gas power plant of capacity 1 MW. It was proposed by PEDA that power plant based on bio-gas shall be operated at capacity 0.5 MW and rest of the bio-gas to be generated using animal dung, shall be converted into CBG, which shall be sold in open market. Besides, liquid effluent about 10 MLD in the form of washings and urine of animal is directly discharged into Budha Nallah.

The State government/ Municipal Corporation, Ludhiana has not taken any action to treat the wastewater containing high value of BOD and COD from dairy complex located at Tajpur road and Haibowal, Ludhiana.

No steps have been taken to manage the cow dung, of diary complex, Tajpur Road, Ludhiana, *which is big source of further degradation of Budha Nallah effluent.*

(Para 9.1.16.1 of the report)

(t) *Desilting of Budha Nallah:*

The status is submitted as under

Sr. no.	***Activity to be carried out as per the Recommendations of Monitoring Committee during its visit to Ludhiana on 1.5.2019***	***Action Taken report of department***
1.	*Department of water resources shall take immediate steps to desilt the Budha Nallah within city area within 2 months i.e. before monsoon*	*Report is yet to be submitted by the department of water resource.*

(Para 9.1.17 of the report)

9.2 River Beas

9.2.1 Background

River Beas has total length of 460km and originates from Beas kund and Beas Rishi within north western Himalaya. After leaving Himachal Pradesh, it enters Punjab at Talwara and joins river Sutlej at Harike.

As per the Action Plan for clean river Beas, prepared by Directorate of Environment & Climate Change, Department of Science Technology and Environment, Government of Punjab, 16 Local Bodies have been identified discharging their wastewater either directly or indirectly into river Beas. Besides, 2 industrial focal points and 1 Jalandhar Development Authority discharge their wastewater directly or indirectly into river Beas.

With regard to discharge from the villages, 75 villages have been identified, of which 17 villages have discharge more than 300 KLD, 43 villages have discharge of 100 KLD to 300 KLD and 15 villages have discharge less than 100 KLD.

12 water polluting industries are located in the catchment area of river Beas which are located at Pathankot, Gurdaspur, Mukerian and Dasuya.

Status of Sewage treatment plants for the towns

S. No	Name of STP	Installed Capacity (MLD)
1.	Sri Hargobindpur	1
2.	Dasuya	4
3.	Mukerian	5
4.	Sham Churasi	1
5.	Tanda	4
6.	Begowal	2.5
7.	Bhulath	4
8.	Kapurthala	25
9.	Sultanpur Lodhi	2.6
10.	Pathankot	27
Total		76.1

(Para 9.2.1 of the report)

9.2.7 Status of STPs under construction (Beas)

- ***Presently, no STP is under construction***

(u) Status of STPs under planning and funds tied up:

S.No	Name of the town	Capacity of STP	Likely date of completions	Current status as on 30.9.2019
1.	Kartarpur	4	31.10.2020	Tender called and to be opened on 30.10.2019
2.	Dhilwan	2.5	Land issue	Case of land pending in DC Office at DRO level
3.	Kothi Pandita, Pathankot	2	31.05.2020	DNIT under preparation
4.	Adarsh Nagar.	1.7	31.05.2020	DNIT under preparation
5.	Hariana	2	31.10.2020	Tender called and to be opened on 30.10.2019
6.	Sultanpur Lodhi (2 NO.)	1+4	31.10.2020	-Land for 4 MLD is being identified. -1 Mld- Land available. Tender under process.
	Total	16.7		

(Para 9.2.9 of the report)

(v) Status of STPs under planning but funds yet to be tied up:

S.N	Name of the town	Discharge (MLD)	Current status as on 30.9.2019
1.	Talwara	4	Funds Not tied up Case sent to Govt. of Punjab for arrangement of funds
2.	Sujanpur(2 No.)	2+3.5	Funds Not tied up. Land issue. Case sent to Government of Punjab for arrangement of funds.
3.	Rawal & Colonies, Kapurthala	3	Land purchased through PUDA. Funds for STPs to be given by MC.
	Total	12.5	

(Para 9.2.9 of the report)

(w) STPs which require technologically upgradation and funds not tied up so far:

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Sr. no.	Name of the town	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date for completion/ commissioning	Current status as on 30.9.2019
1.	Sri Hargobindpur	1	1	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
2.	Dasuya	4	4	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
3.	Sham Chaurasi	1	1	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
4.	Bhulath	4	4	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
5.	Kapurthala	26	26	No target date given	Funds not tied up. Case sent to Government of Punjab for arrangement of funds.
	Total	**36**	**36**		

(Para 9.2.10 of the report)

(x) Gap Analysis of Sewage of the towns located on River Beas:

Sr. No.	Name of the Town	Total Discharge (MLD)	Present capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
1.	Sri	1	1	0
2.	Dasuya	4	4	0
3.	Hariana	2	0	2
4.	Mukerian	5	5	0
5.	Sham Churasi	1	1	0
6.	Talwara	4	0	4
7.	Tanda	4	4	0
8.	Kartarpur	4	0	4
9.	Begowal	2.5	2.5	0
10.	Bhulath	4	4	0
11.	Dhilwan	2.5	0	2.5
12.	Kapurthala	28	25	3
13.	Sultanpur Lodhi	7.6	2.6	5

14.	Sujanpur	5.5	0	5.5
15.	Pathankot	30.2	27	3.2
	Total	**105.3**	**76.1**	**29.2**

(Para 9.2.11 of the report)

(B) Conclusion as per report are:-

"10.0. Conclusions and recommendations

Based on the meetings and discussions held with the officers of concerned departments of State of Punjab and concerned District Level officers, visit to the industries and other pollution sources and data collected from concerned departments with regard to performance of existing STPs, installation of new STPs, STPs under planning, STPs which require technology up gradation and gap in treatment of sewage, utilization of treated sewage or irrigation, treatment of sewage of villages, water quality of drains/nallah and River Sutlej and Beas, the following conclusions and recommendations are made.

A) RIVER SUTLEJ

- *Punjab Pollution Control Board is regularly carrying out monitoring of sewage treatment plants (STPs) of the towns. STPs monitoring data prepared for the period January, 2018 to June, 2018 and July, 2018 to Dec, 2018 indicate that 3351% of existing STPs were complying with the norms w.r.t. BOD, TSS and F. coli parameters and 75-84% of the STPs were found complying with norms of TSS parameters and 33-51% of STPs were found complying with norms of F.coli parameters and 62% of STPs were found complying with the norms of BOD parameter.*
- *The monitoring data, prepared by PPCB, for the period Jan, 2019 to June, 2019 and July, 2019 to Sep, 2019 indicate that 47-62% of STPs have been found complying with BOD, TSS and F.coli parameters. 73-78% of STPs have been found complying with BOD parameter, 84-93% of STPs are found complying with TSS parameter and 47-62% of STPs have been found complying with F.coli parameter.*

✓ *The comparison of monitoring data of STPs prepared for the period Jan to Dec, 2018 and Jan to Sep, 2019 indicate that there is improvement in the performance of STPs w.r.t BOD, TSS and F.Coli parameters. In order to further improve the performance of STPs, the Monitoring Committee recommends as under:*

✓ *Municipal Corporations/ Municipal Councils/ PWSSB or any other agency operating the STPs,*

should operate their STPs as per the operation and maintenance manual prepared by PWSSB.

- ✓ *These departments should impart trainings to the Supervisory staff.*
- ✓ *In order to bring down the F. coli parameter within the norms, adequate dosing of disinfectant with proper disinfectant contact mechanism should be provided.*
- ✓ *Concerted efforts may be made by all the concerned departments to bring down the non compliance of STPs to significantly low level.*
- ✓ *OCEMS along with flow meters shall be installed at inflow, outflow and bye-pass of the STPs and record in this regard may be maintained by the STP operator.*
- ✓ *OCEMS and CCTV cameras on all the STPs may be ensured to be installed by 30/11/2019, failing which environment compensation may be imposed by PPCB on the defaulting STPs.*

2. *For 50 towns located on River Sutlej, 75 STPs are required, 48 STPs in 29 towns have been provided. As per the current status, 5 STPs for the 3 towns namely Guru Har Sahai, Kotkapura and Giddadbaha are under construction and, these are likely to be completed within next 2 months.*

3. *For the 12 towns having sewage discharge of 353 MLD, for which STPs were under planning, now as per current status, funds have been tied up for STPs to be constructed in Jalandhar and Ludhiana. These funds have been tied up in AMRUT and Smart City Schemes, of which Govt. of Punjab share is yet to be arranged and these STPs are likely to be completed by 31.03.2022.*

The monitoring Committee recommends that these STPs should be completed by 31.3.2021.

4. *Sewage treatment plants for 10 towns (sewage discharge 28 MLD) namely Bhagta Bhaika, Bhai Roopa, Kotha Guru, Arniwala, Malian Wala, Mamdot, Mudki, Mahilpur, Nihalsinghwala and Barhiwala are under planning and funds (Rs 284.93 crore) for the same have not been tied up by the department of local Govt.*

   The committee recommends that funds for installation of STPs for these towns should be tied up by 31.12.2019 and these STPs should be completed and commissioned by 31.3.2021.

5. *As per the data provided by PPCB, there is a gap of 381 MLD sewage of 22 towns (out of 50 towns) for which no arrangements have been made to provide the funds to treat the sewage so that water quality of river Sutlej is improved.* ***The Deptt. of local Government should***

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make arrangements to provide funds for treatment of gap discharge of 381 MLD sewage in a time bound manner so that STPs may be completed by 31.3.2021.

6. *Existing sewage treatment plants of Jalandhar of capacity of 100 MLD and Ludhiana of capacity 466 MLD, there is need to make technological up gradation to achieve the latest norms.*

   The department of Local Govt. should make arrangements to provide adequate funds so that up gradation of these STPs may be completed in a time bound manner.

7. *PSIEC shall submit complete timelines including tendering, installation and commissioning of CETPs for various focal points located in the different town of the State by 30.11.2019.*

8. *Sewage treatment facilities for the treatment of sewage of 75 villages, selected in the first phase, may be installed by 31.01.2020. The Govt. of Punjab may release the funds amounting to Rs. 22.50 crore timely.*

9. *For utilization of treated sewage for irrigation, irrigation network for 23 STPs has been laid. Some of the irrigation schemes have been commissioned. The Department of Soil and Water conservation shall ensure to commission all the irrigation schemes immediately so that treated Sewage may be utilized for irrigation purpose.*

10. *Regarding reuse of treated wastewater of STPs at Jamalpur, Balloke and Bhattian of total capacity 466 MLD, department of soil and water conservation has already been directed to carry out feasibility studies but the*

    Department of Soil and Water conservation shall submit feasibility study for reuse of treated sewage of STPs at Jamalpur, Bhattian and Balloke by 30.11.2019.

11. *Though the textile dyeing industries of Ludhiana have installed their individual effluent treatment plants but in order to maintain one outlet and achieve the stringent standards, 3 CETPs of capacity 15 MLD, 40 MLD, 50 MLD are under construction. 15 MLD CETP for treatment of effluent of dyeing industries of Bahadurke road Ludhiana, was proposed to be commissioned by 30.06.2019 but the same has not been commissioned so far.*

    - *The Monitoring Committee in its 5th meeting held on 23.07.2019 has directed Punjab Pollution Control Board to ensure to operationalize 40 MLD and 50 MLD CETPs for cluster of dyeing industries of Ludhiana as per the time schedule mentioned in the Action Plan, failing which action including environment*

compensation shall be imposed by Punjab Pollution Control Board.

- *Punjab Pollution Control Board has been further directed by the Monitoring Committee in its 6th meeting held on 20.08.2019 to put a dedicated team exclusively for monitoring the progress and resolving and escalating the issue of CETP's on day to day basis.*

Therefore, the Monitoring Committee recommends that Punjab Pollution Control Board shall make concerted efforts to get commission these CETPs as per the time schedule mentioned in the action plan, failing which environment compensation of suitable amount may be imposed on the Special Purpose Vehicles (SPVs) of these CETPs.

- *PPCB shall issue necessary directions under the provision of Water Act, 1974 to the textile dyeing industries located in non designated areas which have no Connectivity with the CETPs (under Constructions) to shift at some suitable location in the designated areas which may have connectivity to these CETPs.*

12. *All the large scale textile dyeing industries of Ludhiana should upgrade their effluent treatment plants to achieve the standards at par with the standards prescribed for CETPs for small and medium scale textile industries of Ludhiana by 30.06.2020.*

13. *The Monitoring Committee in its 6th meeting held on 20.8.2019 has directed Municipal Corporations Ludhiana and Jalandhar to provide firm timelines for setting up of ETP's and Biogas Plants for Management of Dairy Waste, which is a big source of contamination w.r.t BOD, TSS and F. Coli parameters.*

However, no steps have been taken to install ETPs to treat the liquid effluent from these dairy complex (Tajpur Road and Haibowal dairy complex). To manage the cow dung, part of it is utilized at Haibowal dairy complex, Ludhiana for running of biogas plant but no steps have been taken to install biogas plant at Tajpur road. Therefore, treatment facilities including biogas plants at these dairy complex should be installed by 31.3.2021.

14. *During the 5th meeting of the Monitoring Committee held on 23.7.2019 with the officers of concerned departments, it was observed that %age of inspection of industries conducted by the Punjab Pollution control Board has been reduced and no inspection has been carried out at the level of senior officers of PPCB.*

Therefore, PPCB was directed to ensure the compliance. Punjab Pollution Control Board should increase the inspection of industries by way of making surprise inspections and through Environment Protection squads.

15. *Regarding continuous failure of CETP, leather complex, Jalandhar, Punjab Pollution Control Board has imposed a penalty of Rs 25 lac on account of noncompliance along with filing of 3 cases in the court of law for violating the provisions of Water Act, 1974.*

PPCB shall also issue necessary directions under the provisions of Water Act, 1974 to the Special Purpose Vehicles (SPVs) to upgrade the existing CETP (based on zero liquid discharge technology) within the particular time schedule.

- *PPCB shall ensure that the quantity of effluent discharged from the leather tanning industries of Jalandhar, should not be increased more than 5 MLD. No additional quantity of effluent may be allowed to discharge by these leather tanning industries without enhancing the capacity of CETP based on Zero Liquid Discharge Technology. No effluent should be allowed to be discharged into Kala Singhian drain from the proposed CETP*

16. *PPCB shall notify pretreatment standards for CETP at the earliest as directed by the Hon'ble NGT vide its order dated 28.2.2019.*

17. *Punjab Pollution Control Board shall comply with the recommendations made by the Monitoring Committee during its visit to the industries of Ludhiana area on 16.8.2019 and action taken report be submitted to the Committee.*

18. *Punjab Pollution Control Board shall comply with the recommendations made by the Monitoring Committee during its visit to 25 MLD CETP, Baddi (Himachal Pradesh) on 9.9.2019 and action taken report be submitted to the Committee.*

19. *Punjab Pollution Control Board shall comply with the recommendations made by the Monitoring Committee during its visit to industries of Gaunspur (Ludhiana) on 11.9.2019 and action taken report be submitted to the Committee.*

20. *The concerned departments of State of Punjab shall comply with the directions given/recommendations made by the Monitoring Committee in its meeting held on 1.8.2019 at Jalandhar, 8.10.2019 at Sultanpurlodhi and 17.10.2019 at Kapurthala to control pollution sources into Kala*

Singhian drain and Holy Bein as mentioned at point no. 4.0, 7.0 and 8.0 of this report.

21. *Regarding desilting of Budha Nallah, Department of Water Resources, Govt. of Punjab was directed in the meeting of the Monitoring Committee held on 1.5.2019 at Ludhiana to desilt the Budha Nallah within city area within 2 months.* ***No Progress report has been submitted by the department of Water Resource.***

22. *Water quality monitoring data of river Sutlej for the period Jan, 2018 to Dec, 2018 and Jan, 2019 to June, 2019 and Sep, 2019 indicate that there is improvement w.r.t DO, BOD, TSS and F.coli parameters.*

In order to further improve the water quality of river Sutlej, the department of Local Govt./PWSSB or other executing agency of State of Punjab should install and commission all the STPs for the towns/habitation areas located in the catchment area of river Sutlej within the time schedule as mentioned in the Action Plan.

23. *PPCB is monitoring the quality of pollution sources entering into Budha Nallah but no water quality of Budha Nallah is monitored.*

PPCB should start monitoring water quality of Budha Nallah immediately bimonthly except monsoon period.

24. *Monitoring data w.r.t water quality of kala Singhian drain indicate that there is improvement with respect to heavy metals like T.Cr, Ni, Zn, Fe and Pb. No improvement has been made with respect to BOD, COD and TSS parameters.*

Therefore, Municipal Corporation, Jalandhar should close all the outlets carrying untreated sewage of colonies into Kala Singhian drain and the untreated sewage of these colonies be diverted to nearby STPs.

25. *Though there is improvement in the quality of water in river Sutlej w.r.t DO, BOD, TSS and F. coli parameter up to the upstream of Buddha Nallah before its confluence to river Sutlej (Point No. 9.1.18.1 and 9.1.18.2) but after the mixing of Buddha Nallah wastewater with river Sutlej, the quality of river water is degraded due to fall in DO level from 7.5 mg/I to 2.7 mg/I and increase in value of F. Coli parameter from 915 MPN/100m1 to 46000 MPN/100m1, it indicates that the contaminated effluents, generated due to discharge of untreated / partially treated sewage of Ludhiana city and industrial effluents into Buddha Nallah, has degraded the quality of river Sutlej water.* ***Therefore monitoring committee recommends as under:***

i) *Municipal Corporation, Ludhiana should install new STPs to treat 200 MLD gap in sewage treatment as per the latest norms by 31.03.2021.*

ii) *Municipal corporation, Ludhiana should upgrade their existing STPs (466 MLD capacity) to meet with the latest norms by 31.03.2021.*

iii) *The Municipal Corporation Ludhiana should plug all the 16 direct outlets, carrying untreated domestic sewage of Ludhiana City, presently being discharged into Budha Nallah and divert the same to nearby STPs. These outlets should be closed by 30.6.2020.*

iv) *Special Purpose Vehicle (SPV) and operator of Common Effluent Treatment Plant (CETP) based on Zero liquid discharge technology installed at Ludhiana, for small scale electroplating industries of Ludhiana and other areas should comply with the recommendations made by the monitoring committee during its visit to Ludhiana area on 16.08.19 (point no. 3.6 of this report) immediately.*

v) *Punjab Pollution Control Board shall increase its surveillance for surprise inspection of large scale electroplating industries of Ludhiana to ensure that effluent treatment plants (based on zero liquid discharge technology), installed by these industries should be operated at all the times and no effluent from these industries may be allowed to discharge into sewerage system or any other disposal. The recovered water from zero liquid discharge technology ETPs should be recycled back into the processes of the industries.*

26. *Punjab Pollution Control Board shall ensure that common effluent treatment plant of capacity 0.15 MLD (150KLD) for small scale electroplating industries of Jalandhar area should be installed and Commissioned within the time schedule as mentioned in the Action Plan. PPCB may issue necessary directions under the provisions of the Water Act, 1974 to the special purpose vehicles (SPVs) of the industries accordingly.*

27. *Municipal Corporation Jalandhar shall install new sewage treatment plants for treatment of 100 MLD gap in sewage quantity by 31.03.2021.*

28. *PPCB shall install Real Time Water Quality Monitoring System (RTWQMS) at the appropriate locations by 15.12.2019.*

B) River Beas

1. *Punjab Pollution Control Board is regularly carrying out monitoring of sewage treatment plants of the towns.*

✓ *STPs monitoring data prepared for the period January, 2018 to June, 2018 and July, 2018 to Dec, 2018 indicate that 29-30% of existing STPs were complying*

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with the norms w.r.t. BOD, TSS and F.coli parameters and 8690% of the STPs were found complying with norms of TSS parameter and 29-30% of STPs were found complying with norms of F.coli parameter and 50-71% of STPs were found complying with the norms of BOD parameter.

- ✓ *STPs monitoring data prepared for the period Jan, 2019 to July, 2019 and July, 2019 to Sep, 2019 indicate that 30% of STPs have been found complying with BOD, TSS and F.coli parameters. 60-70% of STPs have been found complying with BOD parameter, 80% of STPs are found complying with TSS parameter and 30% of STPs have been found complying with F.Coli parameter.*

In order to improve the performance of STPs, the Monitoring Committee recommends as under:

- *Municipal Corporations/ Municipal Councils/ PWSSB or any other agency operating the STPs, should operate their STPs as per the operation and maintenance manual prepared by PWSSB.*
- *These departments should impart trainings to the Supervisory staff.*
- *In order to bring down the F. coli parameter within the norms, adequate dosing of disinfectant with proper disinfectant contact mechanism should be provided.*
- *Concerted efforts may be made by all the concerned departments to bring down the non compliance of STPs to significantly low level.*
- *OCEMS along with flow meters shall be installed at inflow, outflow and bye-pass of the STPs and record in this regard may be maintained by the STP operator.*
- *OCEMS and CCTV cameras on all the STPs may be ensured to be installed by 30/11/2019, failing which environment compensation may be imposed by PPCB on the defaulting STPs.*

2) *As per water quality monitoring data of river Beas, prepared by PPCB, for the period January 2018 to June 2018, Sep, 2018 to Dec 2018, Jan 2019 to June, 2019 and Sep 2019, the value of BOD was observed as 1-2 mg/I, which is low. The values of F. coli has been found to be varied between 37 to 790 MPN/100 ml. The overall water quality of River Beas at Harike becomes C" grade as per water quality criteria prescribed by CPCB. Water with quality of 'C' grade can be used for drinking purposes with conventional treatment followed by disinfection.*

3) *Water quality monitoring data of Holy Bein (Kali Bein) monitored by PPCB for the period of Jan 2018 to Sep,2019 indicated that at Gurudwara Ber Sahib, the value of BOD remains between 3-4 mg/I and F-coli: 238-315 MPN/100m1. As per Water quality criteria prescribed by CPCB, the Water of Holy Bein can be utilized for bathing*

purposes but it can also be utilized for drinking purpose only after conventional treatment followed by disinfection.

4) *For total 15 towns located on River Beas, 21 STPs are required, 10 STPs in 10 towns have been provided. As per the current status, no STP is under construction.*

5) *For the remaining 5 towns having sewage discharge of 16.7 MLD, for which STPs were under planning, as per current status, funds have been tied up and these STPs are likely to be completed by 31.03.2022.*

   However, the monitoring Committee recommends that these STPs for 5 towns should be completed by 31.3.2021.

6) *Sewage treatment plants for additional 3 towns (sewage discharge 12.5 MLD) namely Talwara, Sujanpur and Rawal and its colonies, (Kapurthala) are under planning but the funds (Rs 73 crore) for the same have not been tied up by the department of local Govt.*

   The committee recommends that the department of Local Govt. should tie up the funds by 31.12.2019 and these STPs should be completed and commissioned by 31.3.2021.

7) *As per the data, there is a gap of untreated sewage of 29.2 MLD from 8 towns (out of total 15 towns) for which no arrangements have been made to provide the funds to treat the sewage so that water quality of river Beas is further improved.*

   The monitoring committee recommends that the department of Local Government should make arrangement to provide funds to treat the gap sewage discharge of 29.2 MLD in a time bound manner.

8) *For utilization of treated sewage of towns for irrigation, the department of soil & water conservation has completed irrigation schemes for 6 towns up to 31.12.2018 to utilize 20.5 MLD treated sewage in command area of 716 hectares of land.*

9) *In the year, 2019 (upto 30.9.2019), the department of Soil & Water Conservation has laid irrigation schemes to utilize treated sewage discharge of 30.2 MLD in a command area of 655 hectares of land.*

   The department of Soil & Water Conservation shall commission these irrigation schemes immediately.

   1) *In order to check the performance of effluent treatment plant and the compliance of standards by the industries, Punjab Pollution Control board should increase the inspection of industries by way of making surprise inspections and through Environment Protection Squads.*

2) *Municipal Council, Kapurthala and Sultanpur Lodhi should close all the outlets, carrying untreated sewage, falling into Holy Bein. The untreated sewage of these outlets may be treated either in the nearby STPs or separate treatment facilities may be provided and the treated sewage may be utilized for irrigation. No treated/untreated sewage may be allowed to discharge into Holy Bein leading to river Beas.*

3) *The treated sewage of Municipal Council, Kapurthala and Sultanpur Lodhi may be utilized for irrigation purposes and no treated/untreated sewage may be allowed to discharge into Holy Bein.*

4) *PPCB shall install Real Time Water Quality Monitoring System (RTWQMS) at the appropriate locations by 15.12.2019."*

Consideration of the Report:

18. River Rejuvenation monitoring may generally involve following components:

a. Environmental Flow
b. Quality of the River and groundwater
c. Sewage Treatment Plants and Online Monitoring
d. Use of treated Waste Water
e. Septage and Faecal Sludge Management
f. Industrial Pollution and CETPs
g. Solid Waste Management and issues of Legacy Waste in micro-watersheds of vicinity
h. Creating public awareness through Information, Education and Communication (IEC)

However, in the present case, the data available is with reference to items c to f which we may consider but the Committee may in its subsequent reports give information with reference to the remaining items also. Possibility of setting up of biodiversity parks including wetlands at appropriate locations may also be explored.

19. Further steps need to be taken by the State of Punjab, regulatory authorities and concerned local bodies in

accordance with law after following the due procedure. The authorities may ensure that there is no discharge of untreated or partially treated pollutants or dumping of other waste in the rivers in violation of statutory provisions under the Water (Prevention and Control of Pollution) Act, 1974 (Water Act). The concerned authorities may take further action in the light of the report.

20. The Satluj and Beas rivers being identified river stretches by CPCB, directions of this Tribunal in O.A. No. 673/2018 dated 06.12.2019 will apply to the said river stretches particularly with regard to adherence to the timelines to ensure atleast in-situ remediation as an interim arrangement till 31.03.2020 failing which compensation will be payable from 01.04.2020 by the State which may be recovered from the concerned erring polluters/officers and ensuring full compliance of the action plans by 31.03.2021 failing which compensation will be payable in terms of the said order.

Letter of the Committee dated 26.11.2019 regarding non-seriousness of the officers of Government of Punjab:

21. This Tribunal also received letter dated 26.11.2019 pointing out non-seriousness of the officers of the State of Punjab and not responding to the notice of the Committee to attend significant meeting. By way of e-mail it was informed that a meeting was scheduled on 25.11.2019, Principal Secretaries, Local Government and Water Resources, Punjab along with other officers were requested to attend personally for important decision at responsible level. Not only officers did not attend,

no response was sent on account of which the meeting had to be adjourned and lead the Committee to pass a resolution as follows:-

> *"Serious issues regarding discharge of untreated wastewater into the Holy Bein and non-compliance to the directions issued by the Committee have been raised from time to time. the senior officers i.e. the Principal Secretary, Local Government and Principal Secretary, Water Resources were requested vide letter No. CEC/SB/2019/169, dated 25.11.2019 to participate in the meeting personally on 26.11.2019 at 11.30 AM at Forest Complex, Sector 68, Mohali so that commitment could be made at responsible level. Intimation was also sent to them on 25.11.2019 through email and telephonic message was also conveyed. No communication was received that they are unable to attend this meeting on account of their pre-occupations. The officers from other departments are available. We waited upto 11.45 AM. No message has been received from the office of the above said officers. Their attitude show non-seriousness about this extremely important issue which concerns the future generation. It also shows their disrespect to the directions issued by the Committee constituted by the Hon'ble NGT.*
>
> *On account of their non-availability meeting is adjourned. Let a report be sent to Hon'ble National Green Tribunal, New Delhi to take appropriate action."*

Learned counsel for the State of Punjab has made a statement that the issue to be looked into at the highest level in the State and remedial action taken. Let the Chief Secretary, Punjab look into the matter and take further remedial action in this regard.

XI. Incidental issues:

22. We consider it necessary to clarify the procedure for functioning of the Committee henceforth. The Committees may consider all relevant issues and give its reports preferably once in two months to this Tribunal with a copy to all the concerned Chief Secretaries and SPCBs/PCC. The concerned Chief

Secretaries/SPCBs/PCC may look into the said report and give their response to this Tribunal within two weeks thereafter. The response may include the action taken by the statutory bodies or other authorities. Since the Committee constituted by this Tribunal is a Fact Finding/Executing/ Monitoring Committee and has to give status report to this Tribunal, its functioning may not be viewed as giving final directions to the regulatory bodies. However, the State regulatory body may take into account the observations of the Committee in their functioning and act their own after considering the response of the alleged polluter. The Committee will be at liberty to point out to this Tribunal that action taken by the regulatory authority was not adequate. These observations are consistent with the Orders of this Tribunal dated 21.10.2019 in O.A. No. 670 of 2018 with regard to the procedure and functioning of a similar Committee in the State of UP. Dr. Babu Ram will act as Technical Expert to the Committee henceforth.

XII. Directions:

23. Accordingly, following directions are issued:

(i) Let the concerned authorities in the State of Punjab take steps in terms of observations and recommendations of the Committee particularly in the matter of setting up of requisite treatment plants in the State, compliance to standards by the existing STPs and fixing responsibility on officials for non-performance of duties, compliance to standards by CETP leather complex, inadequate inspections by officials of SPCB, slow pace with regard to

new/upgradation/rehabilitation of STPs, setting up of new CETPs textile and dyeing industrial cluster, setting up of new ETP for dairy waste, bridging of gap in terms of sewage quantity to be treated, interception of the drains, maintaining flow/release of fresh water in Buddha Nallah and Holy Bein, dealing of Buddha Nalla utilization of treated waste water, treatment facilities for villages, laying down pretreatment standards, desilting of drains, shifting of dyeing industries, organizing health check ups, preventing direct discharges into the drains, increased surveillance of polluting industries, training of the staff. If the timelines laid down in the order of this Tribunal dated 06.12.2019 in O.A. No. 673/2018 are crossed, compensation in terms of the directions in the said order will be payable.

(ii) Local bodies in the catchment area may ensure that solid waste is not dumped into the rivers or the drains connected to the rivers.

(iii) Future functioning of the Committee will be in terms of clarification as per para 22 above.

(iv) Let the Chief Secretary, Punjab look into the matter as mentioned in Para 21 above and take further remedial action.

List for further consideration on 22.04.2020.

Adarsh Kumar Goel, CP

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S.P Wangdi, JM

Dr. Nagin Nanda, EM

December 12, 2019
Original Application No. 916/2018
(Earlier O.A. No. 101/2014)
A

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Annexure-2

OFFICE OF THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.916/2018 (earlier OA No.101 of 2014) OA No.606 of 2018 and OA No.1040 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: sutlejbeasriver@gmail.com

To

1. The Member Secretary,
   Punjab Pollution Control Board,
   Nabha Road, Patiala.

2. The commissioner,
   Municipal Corporation,
   Jalandhar.

No. CMC/SB/2019/ 109 – 110
Dated: 5.11.2019

Subject: **Report on visit to the sewage disposal points, into Kali Bein (Holy bein) and Kala Singhian drain by the Monitoring Committee constituted by the Hon'ble NGT in O.A No. 916 of 2018 in the matter of Sobha Singh V/s State of Punjab and others under the chairmanship of Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court (now as Chairman of the committee) on 02.11.2019**

Please find enclosed herewith a report on visit to the sewage disposal points, into Kali Bein (Holy bein) and Kala Singhian drain by the Monitoring Committee constituted by the Hon'ble NGT in O.A No. 916 of 2018 in the matter of Sobha Singh V/s State of Punjab and others under the chairmanship of Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court (now as Chairman of the committee) on 02.11.2019 for your kind information and necessary action please.

It is requested that necessary action on the recommendations made by the Monitoring Committee may be taken and action taken report be sent to the Committee within 15 days.

DA/as above.

(Dr. Babu Ram) 11/11/19
Member,
Monitoring Committee

Report on visit to the sewage disposal points, into Kali Bein (Holy bein) and Kala Singhian drain by the Monitoring Committee constituted by the Hon'ble NGT in O.A No. 916 of 2018 in the matter of Sobha Singh V/s State of Punjab and others under the chairmanship of Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court (now as Chairman of the committee) on 02.11.2019

The following were present during the visit:-

a) Members of the Monitoring committee.

Sr. No.	Name & Designation	Designation in the committee
1.	Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court	Chairman
2.	Dr. Babu Ram, former Member Secretary, PPCB	Member

b) Punjab Pollution Control Board

1.	Er. Harbir Singh, Senior Environmental Engineer
2.	Er. Bhisham, Assistant Environmental Engineer

c) Municipal Corporation, Jalandhar

1.	Sh. Gagan Luthra, Sub Divisional Engineer

d) Representative of Religious organizations

1.	Sh. Satnam Singh Riar, Manager, Gurudwara Ber Sahib, Sultanpur Lodhi.
2.	Baba Avtar Singh Ji, Head, Dal Samparda Baba Bidhi Chand.

A) Meeting with the Religious organizations and visit to sewage disposal sides.

The Monitoring Committee held meeting with the religious organization and visited the sewage disposal sites as under:

1. Meeting with the representative of SGPC and Dal Samparda Baba Bidhi Chand.

With regard to management of the wastewater being generated by the pilgrims, who have started reaching at Sri Sultanpur Lodhi on the 550th Birth Anniversary of Sri Guru Nanak DevJi, the members of the monitoring committee met Sh. Satnam Singh, Manager, Gurudwara Ber Sahib, Sultanpur Lodhi on 2.11.2019 and apprised him that there is need to maintain the quality of water of Holy Bein (Kali Bein) because it has religious sentiments where Sri Guru Nanak Dev Ji had a holy dip in this Bein years ago. He was requested to manage the wastewater generated from the kitchen, utensils washing and from washrooms etc. in such a way that it should not be discharged into Holy Bein. Similar request was made to Baba Avtar Singh Ji, Head, Dal Samparda Baba

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Bidhi Chand. Both these Heads of the religious organizations assured not to allow the discharge of any wastewater or any other waste into Holi Bein.

2. Visit to the Kala Singhian Drain at Jalandhar

During the visit, the monitoring committee observed as under:

a) Lot of solid waste in the form of municipal solid waste and C&D waste were found dumped along the banks of the Kala Singhian Drain.

b) In some patches of the drain, lot of silt was found deposited in bed of the drain.

c) The wastewater including animal dung was found thrown in the drain by the scattered dairies existing along the Kala Singhian Drain.

3. Visit to the damaged man-hole of the sewer line leading to STP Peer Dad, Jalandhar

A video clip of wastewater discharged from the manhole into the Kala Singhian drain came to the notice of the monitoring committee and the Municipal Corporation stated that in order to repair the damaged manhole, the wastewater was being diverted. In view of that the Committee decided to visit the site on 2.11.2019 and it was observed that the repaired manhole was on the upstream, whereas discharge of the sewage into Kala Singian drain was from the next manhole. As such, it appears that there was no necessity to throw the sewage into the drain. It was further observed that the inspite of repairing the man-hole, some leakages were being entering into the drain. Moreover, a pump set was found placed on the man-hole which apprehend that the officials of Municipal Corporation, Jalandhar may continue to discharge untreated sewage into Kala Singhian Drain during odd hours in order to control the flow into STP. The representative of Municipal Corporation, Jalandhar informed that STP, Peer Dad has been designed for 50 MLD capacity, whereas, the sewage flow reaching at STP is about 65-75 MLD, which hampers the functioning of STP, as such,in order to maintain design discharge of 50 MLD into STP, rest of the quantity of sewage (15-25 MLD) is collected in the collection tank. The monitoring committee was not satisfied with the statement of the official of Municipal Corporation, Jalandhar because the storage capacity of collection tank is not sufficient to store continuous discharge of 15-25 MLD sewage with cumulative discharge of 65-75 MLD into collection tank and thereafter its treatment in the existing STP of capacity 50 MLD.

4. Visit to 50 MLD STP, Peer Dad, Jalandhar

The monitoring committee, in the presence of officers of PPCB and Municipal Corporation, Jalandhar, visited 50 MLD, STP, Peer Dad on 02.11.2019 and following observations were made:

a) The colour of the treated sewage, entering into Kala Singhian Drain, was dark and it was quite turbid.

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b) The operating conditions of STP indicated that the concessionaire had started its operation just before the arrival of the monitoring committee in the premises of the STP.

c) The secondary sludge lying at the bottom of the centrifuging system (dewatering system) was old and its quantity was low. There was very small quantity of fresh sludge on the heap of the old sludge, which indicates that the concessionaire either started the operation of centrifugal system just before the arrival of the committeeor the functioning of STP is not effectiveto generate secondary sludge after maintaining the required concentration of biomass in the aeration tank resulting in low efficiency of STP.

d) The representatives of concessionaire and Municipal Corporation, Jalandhar could not produce any record with regard to generation of secondary sludge per day, its consistency, operation hours of Centrifugal system (dewatering system), quantity of dried sludge and quantity of sludge storage at site and its disposal.

e) The representative of concessionaire claimed that they have not received any O & M charges from the last one year from Municipal Corporation, Jalandhar and they are operating the STP from their own resources. The Monitoring Committee took a serious note in this regard and felt thatwhen Municipal Corporation is not paying O & M charges to the operating agency, then how the operating agency shall operate the STP sincerely with full dedication and how they will perform their duties efficiently?

f) Lot of wild grass was found grown within the premises of the STP, which indicates that the municipal Corporation, Jalandhar is not serious about the operation of the STP and overall housekeeping within STP area was poor.

5) Plugging of outlets falling into Kala Singhian Drain.

a) The representative of the Municipal Corporation, Jalandhar informed that all the outlets falling into Kala Singhian drain, except the following 02 outlets, have been closed.

- Guru Amar Dass colony Disposal.
- Maqsudan Sabzi Mandi Disposal.

It was informed by the representative of the Municipal Corporation, Jalandhar that these outlets shall be closed only after de-silting of sewerage system leading to STP Pholriwal. For de-silting of the sewerage system, dedicated super suction machines are required. The Monitoring Committee took a serious note in this regard because inspite of repeated instructions/directions of the Monitoring Committee, Municipal Corporation has failed to plug these outlets resulting in deterioration in the quality of water of Kala Singhian Drain.

B) Recommendations

In view of the above observations of the Monitoring Committee and discussion held with the officers of the Punjab Pollution Control Board and Municipal Corporation, Jalandhar, the Monitoring Committee has made the following recommendations:

1. PPCB shall issue directions under the provisions of Water (Prevention & Control of Pollution) Act, 1974 to the Manager, Gurudwara Ber Sahib and Other religious organisations that they shall not allow the discharge of any untreated/treated sewage/waste material into Holy Bein. The District Administration shall ensure that no such waste material is discharged into Bein in order to maintain the ecology and eco system of the Bein.

2. Municipal Corporation, Jalandhar shall ensure that no untreated sewage is discharged into Kala Singhian Drain. The pump set, installed at the manhole which was under repair, should be lifted immediately to rule out any possibility to discharge untreated sewage into the drain.

3. Municipal Corporation, Jalandhar shall make arrangements to lift Solid Waste lying dumped on both the banks of the Kala Singhian Drain. In the first phase, a stretch of drain starting from Kapurthala Road to the downstream of STP Peer Dad may be cleared by removing solids from both the banks of the drain by 30.11.2019.

4. The C & D waste lying dumped on the bank of the Kala Singhian Drain may be lifted by Municipal Corporation, Jalandhar by 30.11.2019.

5. Municipal Corporation, Jalandhar shall shift the scattered dairies existing along Kala Singhian Drain to the suitable site within 03 months. In this regard, Punjab Pollution Control Board may issue necessary direction under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988 to the Municipal Corporation, Jalandhar.

6. Municipal Corporation, Jalandhar shall release O & M expenditure of the concessionaire for 50 MLD STP Peer Dad pending from the last one year and shall continue to pay O & M charges regularly to the operating agency so as ensure the regular operation of STP with full efficiency and effectiveness.

7. Municipal Corporation, Jalandhar shall install new STP with additional capacity so as to treat the entire sewage reaching to Basti Peer Dad area by 31.03.2021 and the work of the same shall be allotted by 31.12.2019.

8. Municipal Corporation, Jalandhar shall close both the outlets namely Guru Amar Dass Colony Disposal and Masqudan Sabzi Mandi Disposal by 15.12.2019 by providing two dedicated desilting Super Suction machines.

9. Punjab Pollution Control Board shall collect the data with regard to the O& M charges to be paid to the operating agencies of all STPs of Jalandhar. It shall verify upto which period the same has been paid any balance amount to be paid to the operating agency.Punjab Pollution Control Board shall issue necessary directions under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 to the Municipal Corporation, Jalandhar.

10. Punjab Pollution Control Board shall calculate the amount of Environment Compensation to be imposed on the Municipal Corporation, Jalandhar for the damages caused to the environment due to discharge of untreated sewage by pumping the wastewater from the manhole directly into the Kala Singhian Drain and non-operation of STP Peer Dad and the deterrent cost may be imposed on the Municipal Corporation, Jalandhar.

11. Punjab Pollution Control Board shall ensure the connectivity of OCEMS installed on Effluent Treatment Plants of the industries and STPs of the Local Bodies with its server by 15.12.2019 so as to enable the Board to check online the quality of treated wastewater of STPs/ETPs.

12. Punjab Pollution Control Board shall direct each agency operating and maintaining the STP to maintain record in the register showing the quantity of generation of sludge and mode of disposal alongwith proof of the same.

Dr. Babu Ram,
Member

Justice Jasbir Singh,
Former Judge,
Punjab & Haryana High Court,
(Chairman of the Committee)

Annexure-3

O/C

OFFICE THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.916/2018 (earlier OA No.101 of 2014) OA No.606 of 2018 and OA No.1040 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: sutlejbeasriver@gmail.com

To

1. The Principal Secretary to Govt. of Punjab
   Department of Local Govt.,
   Chandigarh

2. The Principal Secretary,
   Department of Water Resources,
   Chandigarh

3. The Chief Executive Officer,
   Punjab Water Supply & Sewerage Board,
   Chandigarh

4. The Chairman,
   Punjab Pollution Control Board,
   Patiala

5. The Deputy Commissioner,
   Ludhiana

6. The Commissioner,
   Municipal Corporation,
   Ludhiana

7. The Chief Engineer,
   Department of Soil & Water Conservation,
   Mohali

8. The Chief Environment Engineer,
   Punjab Pollution Control Board,
   Ludhiana

9. The Chief Executive Officer,
   Punjab Energy Development Agency,
   Chandigarh

No. CMC/SB/2019/ 147 - 155
Dated: 19.11.2019

Subject: **Minutes of the meeting with the District Level Officers and District level Task Force, Ludhiana held under the Chairmanship of Justice Jasbir Singh, former Judge, Punjab and Haryana High Court, now as Chairman of the Monitoring Committee constituted by the Hon'ble National Green Tribunal in OA no. 916 of 2018 with regard to Control of Pollution in Budha Nallah and subsequently in River Sutlej on 15.11.2019 at 3:00 P.M at Circuit House, Ludhiana.**

Please find enclosed herewith minutes of the meeting with the District Level Officers and District level Task Force, Ludhiana held under the Chairmanship

O/C

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of Justice Jasbir Singh, former Judge, Punjab and Haryana High Court, now as Chairman of the Monitoring Committee constituted by the Hon'ble National Green Tribunal in OA no. 916 of 2018 with regard to Control of Pollution in Budha Nallah and subsequently in River Sutlej held on 15.11.2019 at 3:00 P.M at Circuit House, Ludhiana.

It is requested that necessary action on the directions given by the Chairman of the Monitoring Committee on the issues relating to your department and action taken report be submitted within 21 days.

(Dr. Babu Ram)
Member,
Monitoring Committee

Endst No. CMC/SB/2019/ 156 Dated: 19.11.2019

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, department of Science, Technology & Environment, Chandigarh for information and necessary action please.

(Dr. Babu Ram)
Member,
Monitoring Committee

Minutes of the meeting with the District Level Officers and District level Task Force, Ludhiana held under the Chairmanship of Justice Jasbir Singh, former Judge, Punjab and Haryana High Court, now as Chairman of the Monitoring Committee constituted by the Hon'ble National Green Tribunal in OA no. 916 of 2018 with regard to Control of Pollution in Budha Nallah and subsequently in River Sutlej on 15.11.2019 at 3:00 P.M at Circuit House, Ludhiana.

The List of the participants is as per **Annexure-1.**

Agenda of the Meeting was taken up for discussion as under:

1. Performance of existing STPs of Ludhiana.

The representative of Municipal Corporation Ludhiana apprised that for treatment of sewage of Ludhiana 5 STPs each of capacity 111 MLD, 50 MLD, 48 MLD, 152 MLD and 105 MLD with total capacity of 466 MLD have been installed. Out of these 5 STPs, the performance of 2 STPs (50 MLD & 105 MLD), based on SBR technology, is good, whereas, the performance of 2 STPs (111 MLD & 152 MLD), based on UASB technology, is more or less within the norms. However, Jamalpur STP of capacity 48 MLD, based on UASB technology, is lying defunct due to excess wastewater discharge into STP than its designed capacity.

The Commissioner Municipal Corporation, Ludhiana (MCL) informed that they have carried out joint monitoring with Discharge division of irrigation department on Diwali and Vishavkarama day when the industries were totally closed and total discharge into Budha Nallah was observed as 624 MLD. Earlier, the joint monitoring was also carried out by MCL, PPCB and irrigation department when the industries were in operation and the discharge of Budha Nallah was observed as 766 MLD which implies that the contribution of effluent by the industries is about 140 MLD. Therefore, MCL will be augmenting the capacity of STPs about 255 MLD to ensure the treatment of whole of the sewage of Ludhiana.

It was assured that the performance of STPs of capacity 111 MLD & 152 MLD shall be improved further with the rehabilitation of these STPs. The capacity enhancement with latest technology of 48 MLD STP, Jamalpur shall be made and after enhancement, the capacity of Jamalpur STP shall be 225 MLD.

2. Status of Installation of new STPs/up-gradation of existing STPs.

It was apprised that a comprehensive plan regarding installation of new STPs with project cost of about Rs. 1000 cr. has been prepared which include the installation of 225 MLD new STP at Jamalpur in place of 48 MLD old STP, 50 MLD STP to be installed at Bhattian, 5 MLD for dairy complex Tajpur Road and 10 MLD for dairy Complex Haibowal. Regarding up-gradation of existing STPs, it was informed that 152 MLD STP at Balloke and 111 MLD STP at Bhattian shall be rehabilitated to an

extent that these STPs shall meet with the prescribed standards. For rehabilitation cost of these STPs shall be Rs. 25 crores.

However, the representative of Municipal Corporation, Ludhiana assured that the fresh proposal prepared by the municipal corporation shall be submitted within one week.

3. Status of closing of direct outlets into Budha Nallah.

It was informed that presently 15 outlets, carrying domestic sewage, are directly falling into Budha Nallah and further degrading the water quality of Budha Nallah. The plan for closing of these outlets has also been included in the comprehensive plan costing Rs. 1000 crores, prepared by the corporation. It was assured that these 15 direct outlets shall be closed by 31.12.2021 i.e. period by which new STPs including up-gradation/ rehabilitation and capacity enhancement of existing STPs are completed.

4. Status of installation of OCEMS and CCTV cameras for close monitoring of performance of STPs.

It was apprised that OCEMS and CCTV cameras on all the STPs of Ludhiana shall be installed and commissioned by 15.12.2019.

5. Status of installation of ETPs and biogas plants for dairy complex, Tajpur road and Haibowal, Ludhiana

It was informed that bio-gas plant to manage animal dung about 185 TPD, is already in operation at Haibowal. However, its capacity needs to be upgraded to manage rest of the animal dung. There is also proposal to install bio-gas plant at Tajpur Road to manage the animal dung of Tajpur dairy complex and PEDA is yet to prepare the proposal in this regard. Regarding installation of 5 MLD and 10 MLD ETPs for treatment of liquid wastewater of Tajpur Road and Haibowal dairy complex, the project has been covered under the comprehensive plan costing Rs. 1000 crores. The tenders for allotment of work for installation of ETPs for these dairy complex shall be invited on 15.12.2019.

It was also observed by the members of the Monitoring Committee that the dairy owners are required to issue notice of 15 days by the Municipal Corporation, Ludhiana and PPCB directing them to manage the animal dung in an environmentally sound manner, failing which action under the provision of the Water Act, 1974 and Solid Waste Management Rules, 2016 may be taken as per law and environment compensation of suitable amount be imposed on the dairy owners per day basis till the compliance is made.

The Senior Environmental Engineer, Zonal Office-II, Ludhiana informed that Gaushala at Tibba Road has already installed its own briquetting plant using its animal dung and the briquettes are used as fuel in cremation ground and presently from this Gaushala, no animal dung is discharged into Budha Nallah or any other drain. Therefore, such model can also be replicated for Tajpur and Haibowal dairy complex.

6. Release of fresh water in Budha Nallah.

The Executive Engineer, Department of water Resources informed that PPCB and Municipal Corporation, Ludhiana has released the required amount for the project. The drawing and designed of intake project and from Sirhind Canal to Budha Nallah shall be prepared 31.01.2020 and tender for allotment of work for release of 200 cusec of water into Budha Nallah shall be called on 31.03.2020. The work shall be completed by 31.12.2020.

7. Utilization of treated wastewater of STPs and CETPs for irrigation.

The representative of Department of Soil and water conservation informed that project for utilization of treated sewage of 257 MLD STP at Balloke, has been prepared but the consent of the farmers is required for utilization of treated sewage. It was also informed that for utilization of the treated sewage of Machhiwara Town, irrigation network has been completed.

Regarding utilization of treated effluent of upcoming CETPs for dyeing industries of Ludhiana, it was informed that the proposal of revival of lower of Budha Nallah to use it as irrigation channel is not feasible.

The Chairman of the monitoring committee directed that in the next meeting, Director/Chief Engineer, Department of Soil and Water Conservation and Chief Engineer, Deptt. of Water Resources may be called to get concrete proposal regarding utilization of Budha Nallah water, carrying treated sewage and effluent of dyeing industries of Ludhiana to be treated through CETPs, for irrigation.

8. Installation of River Water Quality Monitoring Stations (RWQMS) in river Sutlej, Beas and Budha Nallah

The Chief Environmental Engineer, PPCB, Ludhiana informed that 04 River Water Quality Monitoring Stations (RWQMS) have been proposed to be set up in river Sutlej, 01 in river Beas and 02 in Budha Nallah. These RWQMS shall be installed by 31.12.2019.

9. Status of water quality of river Sutlej, Beas and Budha Nallah

It was informed that the water quality of river Sutlej is monitored at 16 locations. Out of these locations, the water quality of river Sutlej at down steam of Bucha Nallah has been found decreasing to **'E' class** as per the water quality criteria prescribed by CPCB due to high value of BOD, lower value of DO and high value of T.Coli.

Water quality of river Beas, monitored at 10 locations, more or less remains class-B till its confluence with river Sutlej at Harike.

The quality of effluent of point sources falling into Budha Nallah is also monitored w.r.t. BOD & T.Coli parameters. High values of these parameters have been found at the dairy complex Tajpur and Haiboal dairy complex. However, improvement in the quality of water into Budha Nallah has been observed w.r.t. to BOD parameter monitored during July, 2019 to Oct, 2019.

The Chairman of the Monitoring Committee directed PPCB to monitor water quality of Budha Nallah w.r.t. heavy metals to ascertain as to whether the CETP for electroplating industries is functioning effectively to achieve zero liquid discharge into Budha Nallah and the large scale electroplating industries, based on Zero liquid Discharged Technology, are really achieving the Zero discharge into Budha Nallah.

10. Status of installation of CETPs for cluster of dyeing industries of Ludhiana.

The Chief Environmental Engineer, PPCB, Ludhiana apprised that 15 MLD CETP was to commissioned by 30/6/2019 but the date has been extended upto 30/9/2019 by imposing environmental compensation amounting to Rs. 30000/- per day. But now, the CETP shall be commissioned by 31/12/2019. The Chairman of the Monitoring Committee directed that 15 MLD should be completed by 31/12/2019, failing which environment compensation amounting to Rs. 50000/- per day may be imposed.

Regarding installation of 40 MLD CETP, it was informed that CETP shall be commissioned by 31.12.2019. The Chairman of the Monitoring Committee directed that 40 MLD CETP should be ensure to be completed by 31/12/2019, failing which, an Environment Compensation amounting to Rs. 50000/- per day may be imposed on SPV.

With regard to installation of 50 MLD CETP, it was informed that funds have been tied up. The construction of CETP is going on and it is likely to be completed by 31.03.2020. The Chairman of the Monitoring Committee directed that in case the CETP is not completed by 31.03.2020, Environment Compensation amounting to Rs. 30000/- per day may be imposed on SPV.

However, for the facilitation of SPVs of all these CETPs, the Chairman of the monitoring committee directed that Deputy commissioner, Ludhiana shall hold meeting with SPVs of 15 MLD, 50 MLD & 40 MLD CETPs in the presence of the officers of the PPCB, Municipal Corporation, Ludhiana and to sort-out all the issues relating to these CETPs to ensure that these are commissioned by the proposed dates, failing which, Environment Compensation as mentioned above may be imposed on these SPVs.

11. Shifting of scattered Dyeing Industries.

The Chief Environmental Engineer, PPCB, Ludhiana apprised that there are 21 textile dyeing industries which are located at scattered places of Ludhiana and these have been directed by Chairman PPCB that either these industries may submit proposal for shifting to CETPS compatible areas or PERT chart for installation of ZLD technology with 15 days. Further, these industries shall adopt their choice within 06 months.

The Chairman of the Monitoring committee directed that PPCB shall also take up the matter with Managing Director, PSIEC to allocate suitable industrial plots, if available, in the Focal Point, Ludhiana so that these scattered industries may be easily shifted to the CETP compatible areas.

12. Performance of Effluent Treatment Plants of industries.

It was informed that there are 465 industries which are located in the catchment area of river Sutlej & Beas, out of which 326 industries have been monitored during March, 2019 to Oct, 2019. Out of these 326 industries, 94 Industries were not found complying with prescribed standards. Out of these 94 industries, directions for sealing / disconnection of electric connection have been issued to 06 industries, Bank guarantees of 03 industries have been encashed, new bank guarantees / ECs have been imposed on 38 units, 14 units have been issued advisory notices and action against the remaining units is under process.

After detailed deliberation, the Chairman of the monitoring committee directed as under:-

1. The old STPs of capacity 152 MLD & 111 MLD shall be rehabilitated to meet with the prescribed standards by 31.03.2021 and the Municipal Corporation, Ludhiana shall submit PERT chart for the same by 30/11/2019.

2. The new STPs of capacity 255 MLD, including replacement of 48 MLD Jamalpur STP, presently lying defunct, based on new technology to meet with the latest prescribed standards, shall be completed by 31.03.2021 and Municipal Corporation, Ludhiana shall submit PERT chart for the same by 30/11/2019.

The Chairman of the Monitoring Committee further directed that though 48 MLD STP Jamalpur is lying defunct but, it is being maintained by MC, Ludhiana. Therefore, adequate dosing of disinfectant may be imparted to reduce atleast the value of F.Coli parameter in the sewage before discharge into Budha Nallah.

The description in brief of the projects costing Rs. 1000 crore covered under comprehensive plan, prepared by the Municipal Corporation, may also be submitted by the Municipal Corporation, Ludhiana within 3 weeks.

3. The outlets carrying untreated domestic sewage, directly falling into Budha Nallah, shall be closed after the commissioning of the new STPs i.e. by 31/3/2021. The Municipal Corporation, Ludhiana shall submit PERT chart for the same by 30/11/2019. The PERT chart may include the activities like preparation of project report, date of inviting tender, date of allotment of work and date of completion & commissioning of the project. The committee further directed that in case compliance is not made timely, environment compensation of suitable amount shall be imposed by PPCB.

4. OCEMS and CCTV cameras on all the 5 STPs of Ludhiana shall be installed and commissioned by 15.12.2019.

5. For the management of the animal dung of dairy complex Tajpur road and Haibowal, Ludhiana, biogas plant already installed at Haibowal shall be enhanced by PEDA by 31.03.2021. New bio-gas plant for management of animal dung of Tajpur Road shall be installed by 31/3/2021 by PEDA. Municipal Corporation, Ludhiana shall provide necessary funds to PEDA to ensure the installation of biogas plant within the time schedule.

For the treatment of liquid waste generated from dairy complex Tajpur Road and Haibowal, Municipal Corporation, Ludhiana shall ensure the installation of ETPs of capacity 5 MLD and 10 MLD for Tajpur Road and Haibowal Dairy Complex, respectively, by 31.03.2021.

The Municipal Corporation, Ludhiana shall also issue notice of 15 days to the dairy owners directing them to manage the animal dung in an environmentally sound manner.

As a short term measure, Officers of Municipal Corporation, Ludhiana and Senior Environmental Engineer, Zonal Office-II, Ludhiana shall jointly work out the modalities within 15 days to utilize the animal dung either of Tajpur Road or Haibowal dairy complex to manufacture briquettes at project sites and their utility in the industrial units.

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6. The department of water resources shall ensure that the project regarding release of fresh water from Sirhind Canal into Budha Nallah may be completed by 31.12.2020 and a PERT chart in this regard be submitted to the committee by 30/11/2019.

7. Regarding utilization of treated wastewater of STPs of Ludhiana and CETPs of dyeing industries, Director/Chief Engineer, Department of Soil and Water Conservation and Chief Engineer, Deptt. of Water Resources may be called in the next meeting to get concrete proposal in this regard.

6. Regarding shifting of scattered dyeing industries, it was directed that PPCB shall also take up the matter with Managing Director, PSIEC to allocate suitable industrial plots, if available, in the Focal Point, Ludhiana so that these scattered industrial units may be easily shifted to the CETP compatible areas.

7. The River water quality monitoring stations (RWQMS) in river Sutlej, Beas and Budha Nallah shall be installed by PPCB by 31.12.2019.

8. PPCB shall monitor the water quality of Budha Nallah w.r.t. heavy metals also on monthly basis.

9. Regarding installation of CETPs for cluster of dyeing industries of Ludhiana, Deputy Commissioner, Ludhiana shall hold meeting with all the 03 SPVs of dyeing industries, Ludhiana in the presence of officers of PPCB, Municipal Corporation, Ludhiana and sort-out all the issues to ensure the timely completion of CETPs i.e. 15 MLD CETP by 31.12.2019, 40 MLD CETP by 31.12.2019 and 50 MLD CETP by 31.03.2020, failing which Environment Compensation as mentioned in point no. 10 (page 4) above, may be imposed by PPCB as per law.

10. PPCB shall maintain continuity to check the performance of effluent treatment plant of all the industries on surprise basis/random checking and action against the violating industries may be taken accordingly as per the provisions of the Water Act, 1974.

(Dr. Babu Ram)
Member,
Monitoring Committee

Minutes approved

Justice Jasbir Singh)
Former Judge, Punjab & Haryana High Court
(now as Chairman of the Monitoring Committee)

Annexure-1

List of participants present in the meeting of the Monitoring Committee held in Circuit House, Ludhiana on 15-11-2019

Sr. No.	Name of the Officer/participants	Designation	Organization
1.	Hon'ble Justice Jasbir Singh, Retd. Justice, Punjab & Haryana High Court	Chairman, NGT Monitoring Committee	NGT Monitoring Committee
2.	Sh. S.C. Agrawal, Former Chief Secretary, Punjab	Senior Member	NGT Monitoring Committee
3.	Sant Balbir Singh Seechewal	Member	NGT Monitoring Committee
4.	Dr. Babu Ram, Former Member Secretary, PPCB	Member	NGT Monitoring Committee
5.	Sh. Pardeep Aggarwal, IAS	Deputy Commissioner	District Administration, Ludhiana
6.	Mrs. Kanwalpreet Brar, IAS	Commissioner	Municipal Corporation, Ludhiana
7.	Sh. Gulshan Rai,	Chief Environmental Engineer	Punjab Pollution Control Board
8.	Sh. Sandeep Behl	Senior Environmental Engineer	Punjab Pollution Control Board
9.	Sh. A.K. Kalsi	Senior Environmental Engineer	Punjab Pollution Control Board
10.	Sh. Rajinder Singh	Superintendent Engineer	Municipal Corporation, Ludhiana
11.	Sh. Paramjeet Singh	Environmental Engineer	Punjab Pollution Control Board
12.	Sh. Raj Kumar Goyal	Environmental Engineer	Punjab Pollution Control Board
13.	Sh. Rakesh Garg	Executive Engineer	PWD (B & R)
14.	Sh. Harjot Singh Walia	Executive Engineer	Drainage Department
15.	Sh. Anupam Nanda	Joint Director	PEDA, Ludhiana
16.	Sh. S.S. Dhindsa		Punjab Water Supply and Sewerage Board
17.	Sh. Daljit Singh Cheema, Retd. EIC, PWSSB	Director	M/s Shah Consultants

Annexure-4

OFFICE THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.916/2018 (earlier OA No.101 of 2014) OA No.606 of 2018 and OA No.1040 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: sutlejbeasriver@gmail.com

To

The Chairman,
Punjab Pollution Control Board,
Patiala.

No. CMC/SB/2019/ 227
Dated: 09.12.2019

Subject: **Report on visit to the industries of Ludhiana area on15.11.2019 by the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh & Others Vs State of Punjab & Others.**

Please find enclosed herewith a Report on visit to the industries of Ludhiana area on 15.11.2019 by the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh & Others Vs State of Punjab & Others for your information and necessary action.

It is requested that necessary action on the recommendations made by the Monitoring Committee in the case each industry may be taken and action taken report be submitted within 15 days.

DA/ as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Endst. No. 228. Dated: 09.12.2019

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, department of Science, Technology and Environment, Chandigarh for your information and necessary action please.

DA/ as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Report on visit to the industries of Ludhiana area on 15.11.2019 by the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh & Others Vs State of Punjab & Others.

The following were present during the visit:-

a) Members of the Monitoring Committee

S No.	Name & Designation	Designation in the Committee
1.	Justice Jasbir Singh, Former Judge, Punjab and Haryana High Court, Chandigarh.	Chairman
2.	Sh. S.C. Aggarwal, Former Chief Secretary, Punjab	Senior Member
3.	Sant Balbir Singh Seechewal	Member
4.	Dr. Babu Ram, Former Member Secretary, PPCB	Member

b) Officers of the Punjab Control Board

S No.	Name & Designation
1.	Sh. Gulshan Rai, Chief Environmental Engineer, Punjab Pollution Control Board, Ludhiana
2.	Sh. A.K Kalsi, Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Ludhiana
3.	Sh. Sandeep Behl, Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana
4.	Sh. R.K Ratra, Senior Environmental Engineer, Punjab Pollution Control Board, Head Office, Patiala
5.	Sh. Paramjeet Singh, Environmental Engineer, Punjab Pollution Control Board, Regional Office-III, Ludhiana
6.	Sh. R.K Goyal, Environmental Engineer, Punjab Pollution Control Board, Regional Office-I, Ludhiana
7.	Sh. Rakesh Nayyar, Environmental Engineer, Punjab Pollution Control Board, Head Office, Patiala
8.	Sh. Ashok Garg, Environmental Engineer, Punjab Pollution Control Board, Regional Office-II, Ludhiana
9.	Sh. SatyajeetAttri, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office-III, Ludhiana
10.	Sh. Jaspal Singh, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office-I, Ludhiana
11.	Sh. Gurkaran Singh, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office, Patiala
12.	Sh. Jatinder Kumar, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office-I, Ludhiana
13.	Sh. Bachan Pal Singh, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office-I, Ludhiana

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14.	Sh. Vipan Jindal, Assistant Environmental Engineer, Punjab Pollution Control Board, Regional Office-II, Ludhiana
15.	Sh. Atul Kaushal, Assistant Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana
16.	Sh. Sankarjit Singh, Junior Scientific Officer, Punjab Pollution Control Board, Zonal Lab., Ludhiana
17.	Sh. Charan Singh, Junior Scientific Officer, Punjab Pollution Control Board, Head Office Lab., Patiala
18.	Sh. Baldeep Singh, Scientific Assistant, Punjab Pollution Control Board, Zonal Lab., Ludhiana

1. M/s Om processor Pvt. Ltd., K-3, Textile Colony, Industrial Area-A, Ludhiana.

1.1 Background

As per record of PPCB, the industry is a medium scale red category-dyeing unit and has been granted consent under the provisions of Water Act, 1974 vide no. CTOW/Renewal/LDH1/ 2019/10496820 dated 16.08.2019 valid upto 31.03.2024. The industry is engaged in the process of dyeing of hosiery cloth @ 6500 kg/day, finishing of hosiery cloth @ 3500 kg/day, Printing of hosiery cloth @ 3500 kg/day, crushing/embossing of hosiery cloths @ 3500 kg/day & finishing of garments @ 1000 kg/day using dye & chemicals @ 600 Kg/day as raw material. The manufacturing process of the industry is as under:-

Printing: Dyed cloth -> stitching ->printing -> drying -> dispatch.

Dyeing & finishing: dyed cloth -> crushing/ embossing -> dispatch.

Dyeing & finishing: Grey cloth -> washing-> bleach - >dyeing -> drying -> finishing -> dispatch.

The quantity of effluent generated by the industry is 700 m^3/day into sewer. For the treatment of effluent generated by the industry, it has provided an ETP consisting of the components viz equalization tank, dozing channel, flocculater, primary clarifier, two bioreactors in series, four secondary clarifier, pre-filtration tank, sand filter, carbon filter, filter press etc. and the treated effluent is discharged into municipal sewer. During visit, ETP was in operation. The industry has applied for permission to abstract ground water for industrial use with Central Ground Water Authority (CGWA) with application no. 21-4/925/PB/IND/2017.

1.2 Visit to the industry

The monitoring committee visited the industry on 15.11.2019. The industry is engaged in the process of dyeing of hosiery cloth, finishing of hosiery cloth, Printing of hosiery cloth, crushing/embossing of hosiery cloths & finishing of garments using dye & chemicals as raw material. For treatment of effluent, it has provided an effluent

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treatment plant (ETP) consisting of the components viz equalization tank, dozing channel, flocculater, primary clarifier, bioreactors, secondary clarifier and pre-filtration tank, sand filter, carbon filter, filter press etc. and the treated effluent is discharged into municipal sewer. During visit, the ETP was in operation. The meter reading on the tubewell during visit was found to be 69177.84 and the meter reading of the second tubewell (standby) was found to be 000021.7. The discharge of effluent of the industry is 33.83 m^3/hr i.e. 700m^3/day. The industry also submitted the record regarding operation of ETP/sludge lifted to TSDF, Nimbuan and chemical used.

As claimed by the representative of the industry, the industry is adopting wastewater minimization techniques. It is mixing its dosing chemicals with wastewater from pre-filtration tank. The industry is re-circulating the cooling water back into the process and are using steam condensate recovery in the boiler and by doing so, it is saving water as well as fuel used in the boiler for burning. The sludge is generated by the industry is lifted to TSDF Nimbuan.

1.2.1 Collection of effluent samples

During visit, the effluent samples from the following points were collected and sent to Punjab Pollution Control Board, Laboratory, Patiala for analysis.

a) Collection Tank (Inlet of ETP)

b) Pre-filtration tank

c) Final outlet of ETP leading to sewer

The analysis results, as received from PPCB laboratory, are annexed as per **Annexure-1. These analysis results are given in Table-1 as under:**

Table-1: Analysis results of the effluent samples

Parameters	Inlet of ETP	From Pre filtration tank	Outlet of ETP
pH	9.90	11.54	9.66
COD, Mg/l	305	152	129
BOD, mg/l	102	40	28
TSS, mg/l	180	54	38
TDS, mg/l	6710	4367	4279
Total Chrome, mg/l	BDL	BDL	BDL
Colour, Co-pt units	150	10	10
Phenols, mg/l	BDL	BDL	BDL
SAR	48.3	30.2	27.9
Ammonical nitrogen, mg/l	BDL	BDL	BDL
Sulphide, mg/l	1.2	1.8	1.6
Oil & Grease, mg/l	BDL	BDL	BDL

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1.2.2 Discussion on analysis results and Observations of the Committee

The analysis results of the untreated effluent indicate that the values of COD, BOD, TSS, TDS, Total Chrome, Phenols, SAR, Ammonical Nitrogen, Sulphide and Oil and grease were found to be 305 mg/l, 102 mg/l, 180 mg/l, 6710 mg/l, BDL, BDL, 48.3, BDL, 1.2 mg/l and BDL.

At the pre-filtration tanks, the values of the parameters namely COD, BOD, TSS, TDS, Total Chrome, Phenols, SAR, Ammonical Nitrogen, Sulphide and Oil and grease were observed to be 152 mg/l, 40 mg/l, 54 mg/l, 4367 mg/l, BDL, BDL, 30.2, BDL, 1.8 mg/l. The treatment efficiency of physico-chemical treatment in terms of removal of COD, BOD and TSS was found as 50.2%, 60.8% and 70%, respectively.

At the outlet of effluent treatment plant, the values of these parameters were observed as COD: 129 mg/l, BOD: 28 mg/l, TSS: 38 mg/l, TDS: 4279 mg/l, Total Chrome : BDL, Phenolic Compound : BDL, SAR : 27.9, Ammonical Nitrogen : BDL, Suphide : 1.6 mg/l and Oil & Grease : BDL. The values of COD, BOD, TSS, Total Chrome, Phenolic Compound, Ammonical Nitrogen, Sulphide and Oil & grease are within the prescribed limits. The values of TDS and SAR, which were found as 4279 mg/l and 27.9, are higher than the permissible limits of 2100 mg/l and 26.0. The value of pH has also been found as 9.66, which is beyond the prescribed limits of 5.0 - 9.0. The overall treatment efficiency in terms of removal of COD, BOD and TSS was found as 57.7%, 72.5% and 78.90%, respectively.

1.2.3 Recommendations of the Monitoring Committee

Keeping in view the discussion on the analysis results and observations of the Monitoring Committee, the following recommendations are made:

Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 25 Lakh upon the industry. The said amount may be utilized rejuvenation of quality of river Sutlej water.
2. To revoke the consent granted to the industry under the provisions of Water Act, 1974.
3. The industry shall upgrade its effluent treatment plant to meet with the prescribed standards within 3 months
4. The production capacity of the industry may be reduced by 20% till the upgradation in the existing ETP is made by the industry and it achieves the standards prescribed by Punjab Pollution Control Board / MoEF&CC

2.0 M/s Oriental Knit Fab Pvt. Ltd., 278, Industrial Area-A, Ludhiana.

2.1 Background

As per record of PPCB, the industry is a small scale red category dyeing unit and has been granted the consent under the provisions of Water Act, 1974 vide no. CTOW/Renewal/LDH1/2019/9788657 dated 21.05.2019, valid upto 30.06.2023. The industry is engaged in the process of dyeing on job basis of cotton cloth @ 4.5 Ton/day using dyes & chemicals as a raw material. The manufacturing processes of the industry are Raw martial (Grey polyester yarn/Grey cloth)-Washing- Dyeing & Processing-Washing- Hydro Extraction- Drying - Dispatch.

The quantity of effluent discharge of the industry is 225 m^3/day. For the treatment of effluent generated by the industry, it has provided ETP consisting of the components viz Collection tank, Chemical dozing with zig – zag channel, Flocculater, Clarifier, Bioreactor, Clarifier-II, Pre-filtration Tank, Sand Filter, Carbon Filter, filter press etc. and the treated effluent is discharged into municipal sewer. The officers of PPCB claimed that the industry has adopted wastewater minimization techniques and is using its pre-filtration tank wastewater for mixing of dosing chemicals, re-circulating the cooling water and re-using the steam condensate in the boiler. The industry has applied for permission to abstract ground water for industrial use with Central Ground Water Authority (CGWA) with application no. 21-4/4180/PB/IND/2018.

2.2 Visit to the industry

The monitoring committee visited the industry on 15.11.2019. The industry is engaged in the process of dyeing of cotton cloth using dyes & chemicals as a raw material. The manufacturing processes of the industry are raw material (grey polyester yarn/grey cloth) → washing → dyeing & processing → washing → hydro extraction →drying → dispatch. For the treatment of effluent, it has provided an effluent treatment plant (ETP) consisting of the components viz Collection tank, Chemical dozing with zig – zag channel, Flocculater, Clarifier, Bioreactor, Clarifier-II, Pre-filtration Tank, Sand Filter, Carbon Filter and filter press etc. The treated effluent is discharged into municipal sewer. The industry has installed flow meter and online monitoring system at the outlet of ETP, which needs to be calibrated. The industry submitted the record regarding operation of ETP/sludge lifted to TSDF Nimbuan and chemical used for treatment of its effluent.

As claimed by the representative of the industry, the industry has adopting wastewater minimization techniques. It is mixing its dosing chemicals with wastewater from pre-filtration tank. It is re-circulating the cooling water back in the process and are using steam condensate recovery in the boiler and by doing so, it is saving water as well as

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fuel used in the boiler for burning. The sludge is generated by the industry is lifted to TSDF Nimbuan.

2.2.1 Collection of effluent samples

During visit, the effluent samples from the following points were collected and sent to Punjab Pollution Control Board, Laboratory, Patiala for analysis:-

a) Inlet of ETP
b) Pre-filtration sump well
c) Outlet of ETP

The analysis results, as received from PPCB laboratory, are annexed as per **Annexure-2.**

These analysis results are mentioned as per Table-2 given below:

Table-2: Analysis results of effluent samples

Parameters	Inlet of ETP	Pre filtration sump well	Outlet
pH	8.81	9.48	8.40
TSS, mg/l	286	136	44
TDS, mg/l	2890	3630	2020
COD, mg/l	210	108	90
BOD, mg/l	64	26	19
Ammonical nitrogen, mg/l	5.4	3.6	2.4
Sulphide, mg/l	3.0	1.2	BDL
Phenolic compounds, mg/l	BDL	BDL	BDL
SAR	24.2	44.39	13.70
Total Chrome, mg/l	BDL	BDL	BDL
Oil & Grease, mg/l	5.0	BDL	BDL

2.2.2 Discussion on the analysis results and observations

The analysis results indicate that the values of TSS, TDS, COD, BOD, Ammonical nitrogen, Sulphide, Phenolic Compounds, SAR, Total Chrome and Oil & Grease in the untreated effluent were found to be 286 mg/l, 2890 mg/l, 210 mg/l, 64 mg/l, 5.4 mg/l, 3.0 mg/l, BDL, 24.2, BDL and 5.0 mg/l, respectively.

At the filtration sump, the values of TSS, TDS, COD, BOD, Ammonical nitrogen, Sulphide, Phenolic Compounds, SAR, Total Chrome and Oil & Grease were observed to be 136 mg/l, 3630 mg/l, 108 mg/l, 26 mg/l, 3.6 mg/l, 1.2 mg/l, BDL, 44.39, BDL and BDL, respectively. The treatment efficiency of physico-chemical treatment before filtration system in terms of removal of TSS, COD, BOD and Ammonical Nitrogen was observed as 52.4%, 48.6%, 59.4% and 33.3%, respectively.

At the outlet of the effluent treatment plant, the values of parameters namely TSS, TDS, COD, BOD, Ammonical nitrogen, Sulphide, Phenolic Compounds, SAR, Total Chrome and Oil & Grease were found as 44 mg/l, 2020 mg/l, 90 mg/l, 19 mg/l, 2.4 mg/l, BDL, BDL, 13.70, BDL and BDL, respectively. The treatment efficiency of filtration system (sand

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filter and carbon filter) was found as 73.5%, 16.7%, 27.0% & 33.3%, respectively, interms of removal of TSS, COD, BOD & Ammonical Nitrogen. The values of all the parameters namely pH : 8.40, TSS : 44 mg/l, TDS : 2020 mg/l, COD : 90 mg/l, BOD : 19 mg/l, Ammonical Nitrogen : 2.4 mg/l, Sulphide : BDL, Phenolic Compound : BDL, SAR : 13.70, Total Chrome : BDL and Oil & Grease : BDL are within the permissible limits of pH : 5.5-9.0, TSS : 100 mg/l, TDS : 2100 mg/l, COD : 250 mg/l, BOD : 30 mg/l, Ammonical Nitrogen : 50 mg/l, Sulphide : 2 mg/l, Phenolic Compound : 50 mg/l, SAR : 26, Total Chrome : 2 mg/l and Oil & Grease : 10 mg/l.

It is mentioned here that for the treatment of effluent, the industry has provided effluent treatment plant consisting of physico-chemical treatment, Bioreactor and filtration system. At the pre-filtration sump well, the value of TDS and SAR have been determined as 3630 mg/l and 44.39, whereas, at the outlet of effluent treatment plant i.e. after filtration system, the values of TDS and SAR have been observed as 2020 mg/l and 13.70, respectively. The industry has not provided any mechanism to reduce the value of TDS from 3630 mg/l to 2020 mg/l and SAR from 44.39 to 13.70. These facts indicate that the industry has made some mechanism to dilute the treated wastewater to reduce the values of these parameters (TDS and SAR) to bring them within the permissible limits of 2100 mg/l and 26.0. Thus, the industry has misled the Monitoring Committee by diluting the treated waste either at the outlet of filtration sump well or in the filtration system.

2.2.3 Recommendations of the Monitoring Committee

In view of the discussion on the analysis results and observation of the Monitoring Committee, the following recommendations are made:

Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 25 Lakh upon the industry for misleading the Monitoring Committee for diluting treated wastewater system to bring the values of TDS and SAR within the permissible limits.
2. Chairman, PPCB shall constitute a special team to monitor the industry comprehensively w.r.t. composite sampling of untreated, pre-filtration sump well and treated effluent of the industry after every one hour and make it composite for 12 hours. The study may be carried out for 2 days. The effluent sample collected from each stream (untreated, pre-filtration sump and treated effluent) may be analyzed for all the parameters applicable to textile dyeing industry. The sludge generation after treatment of effluent may be quantified and it may be corroborated with concentration of influent parameters and amount of chemical used for

treatment of effluent of the industry. The study may be conducted within 15 days and necessary action on the recommendations of the Special Team may be taken under the provisions of the Water Act 1974, under intimation to the Monitoring Committee.

3. M/s Sunshine Dyeing Pvt. Ltd., 261 Industrial Area-A, Ludhiana.

3.1 Background

As per record of PPCB, the industry is a medium scale red category-dyeing unit and has been granted consent under the provisions of Water Act, 1974 vide no. R14LDH1CTOW2162616 dated 16.12.2014, which was valid upto 30.06.2019. The industry has applied for renewal of consent under the provisions of Water Act, 1974, which is under process in the Board. The industry is engaged in the process of dyeing of knitted fabric @ 7520 kg/day, garment washing @ 2000 number/day, mercerization @ 500 kg/day using dye & chemicals as raw material. The manufacturing process of the industry are:- Knitted Fabric → Washing → Boiling → Bleaching → Washing → Dyeing → Hydro extraction → Drying → Dispatch.

The quantity of effluent generated by the industry is 432 m^3/day. For the treatment of effluent generated by the industry, it has provided ETP consisting of the components collection tank, chemical dozing with zig–zag channel, flocculater, primary tube-settler, biological tank, secondary tube settler, pre-filtration tank, sand filter, carbon filter, filter press etc. The treated effluent is discharged into municipal sewer. The officers of PPCB have claimed that the industry has adopted wastewater minimization techniques and is using its pre-filtration tank effluent for mixing of dosing chemicals, re-circulating the cooling water and re-using the steam condensate in the boiler. It has been claimed by the representative of the industry that it has proposal to upgrade its ETP with SBR Technology, which is on the trail run. The industry has applied for permission to abstract ground water for industrial use with Central Ground Water Authority (CGWA) with application no. 21-4/917/PB/IND/2017.

3.2 Visit to the industry

The monitoring committee visited the industry on 15.11.2019. The industry is engaged in the process of dyeing of knitted fabric, garment washing, mercerization using dyes & chemicals as raw material. The manufacturing processes of the industry are knitted fabric → washing → boiling → bleaching → washing → dyeing → hydroextration→ drying → dispatch. For the treatment of effluent, it has provided effluent treatment plant (ETP) consisting of the components collection tank, chemical dozing system, flocculater, primary tube-settler, biological tank, secondary tube settler, pre-filtration tank, sand filter, carbon filter and filter press etc. The treated effluent is discharged into municipal sewer. The industry submitted the record regarding operation of ETP/sludge lifted to TSDF Nimbuan and chemicals used for treatment of its effluent.

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The representative of the industry, has also claimed that it is adopting wastewater minimization techniques. It is mixing their dosing chemicals with wastewater from pre-filtration tank. It is re-circulating the cooling water back in the process and are using steam condensate recovery in the boiler and by doing so, it is saving water as well as fuel used in the boiler for burning. The sludge generated by the industry is lifted to TSDF Nimbuan.

3.2.1 Collection of effluent samples

During visit, the effluent samples from the following points were collected and sent to Punjab Pollution Control Board, Laboratory, Patiala for analysis:-

a) Collection Tank (Inlet of ETP)
b) Pre-filtration tank
c) Final outlet leading to sewer

The analysis results, as received from PPCB laboratory, are annexed as per **Annexure-3.** These analysis results are mentioned as per Table-3 given below:

Table-3: Analysis results of effluent samples

Parameters	Inlet of ETP	From Pre filtration tank	Outlet of ETP
pH	8.86	8.26	8.09
TSS, mg/l	120	77	30
TDS, mg/l	3560	2082	1986
Colour, Co-pt units	300	20	10
COD, mg/l	120	80	66
BOD, mg/l	34	26	20
Phenolic compounds, mg/l	BDL	BDL	BDL
Ammonical nitrogen, mg/l	10.4	5.0	3.0
SAR	8.8	6.0	5.2
Total Chrome, mg/l	0.24	BDL	BDL
Sulphide, mg/l	4.0	1.8	BDL
Oil & Grease, mg/l	BDL	BDL	BDL

3.2.2 Discussion on the analysis results and observation of the Committee.

The analysis results indicate that the values of BOD, COD, TDS and TSS in the untreated wastewater were observed as 34 mg/l, 120 mg/l, 3560 mg/l and 120 mg/l, respectively. The values of Total Chrome, Sulphide, SAR and Ammonical Nitrogen in the untreated wastewater were observed as 0.24 mg/l, 4.0 mg/l, 8.8 and 10.4 mg/l, respectively. Phenolic Compound and Oil & grease were not detected in untreated wastewater.

The values of parameters namely BOD, COD, TDS and TSS in the effluent after physico-chemical treatment but before filtration system were observed as 26 mg/l, 80 mg/l, 2082mg/l and 77 mg/l, respectively. The treatment efficiency of physico-chemical treatment in terms of removal of parameters was determined as BOD: 23.5%, COD: 33.3% and TSS: 35.8%. The values of total Chrome and Sulphide have been found reduced from 0.24 mg/l to BDL and 4.0 mg/l to 1.8 mg/l, respectively.

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At the outlet of effluent treatment plant, the values of parameters namely BOD, COD, TDS and TSS were found as 20 mg/l, 66 mg/l, 1986 mg/l and 30 mg/l, respectively. The treatment efficiency of the filtration system in terms of removal of these parameters was observed to be BOD: 23.1%, COD: 17.5%, and TSS: 61.0%. The value of TDS has been found reduced to 1986 mg/l from 3560 mg/l, whereas, the value of TDS cannot be reduced without evaporation or RO system. However all the parameters viz. BOD: 20 mg/l, COD: 66 mg/l, TSS: 30 mg/l, TDS: 1986 mg/l, pH: 8.09, SAR: 5.2, total Chrome: BDL, Sulphide: BDL, Oil and grease: BDL and Phenolic Compounds : BDL, are within the permissible limits.

It is mentioned here that the values of BOD: 34 mg/l and COD: 120 mg/l are non-realistic values because the literature study indicates that in the untreated wastewater from Textile dying industries, the values of these parameters vary between 407-662 mg/l as BOD and 780-1460 mg/l as COD (P, Manikandan et al; physico chemical analysis of textile industrial effluents from Tirupur city, tn, India: International Journal of Advance Research In Science And Engineering IJARSE, Vol. No.4, Issue No,2, February 2015 pp: 93-104). Another study, conducted by M.N Abdallah and W.S.A. Halim titled as Biochemical Treatment Textile Industrial Wastewater published in International Journal of Engineering Sciences & Research Technology: vol. 7(5), May, 2018.PP1-10, indicates that the values of BOD and COD vary between 235-600 mg/l and 993-1606 mg/l. Thus, it is reiterated that the values of BOD and Cod as mentioned in the analysis results (Table-3), are non realistic.

Therefore, either the industry had diluted its untreated wastewater with fresh water or it had stored only washing effluents in the collection tank where the untreated wastewater is collected. Had the values of BOD and COD in the untreated effluent would have been there as mentioned in the literature i.e. BOD : 235 mg/l and COD : 993 mg/l, the present treatment system (with overall treatment efficiency of 41.2 % for BOD and 45% for COD parameter) could not have brought the parameters (BOD and COD) within the prescribed limits. Thus, the analysis results of the untreated effluent as BOD: 34 mg/l and COD: 120 mg/l are not acceptable to the Committee. Rather, industry has misled the Monitoring Committee by diluting untreated wastewater.

3.2.3 Recommendations of the Monitoring Committee

In view of the discussions on the analysis results and observations of the Monitoring Committee, the following recommendations are made.

Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 25 Lakh upon the industry for misleading the Monitoring Committee for diluting the untreated wastewater
2. Chairman, PPCB shall constitute a special team to monitor the industry comprehensively w.r.t. composite sampling of untreated, pre-filtration sump well and treated effluent of the industry after every one hour and make it composite for 12 hours. The study may be carried out for 2 days. The effluent sample collected from each stream (untreated, pre-filtration sump and treated effluent) may be analyzed for all the parameters applicable to textile dyeing industry. The sludge generation after treatment of effluent may be quantified and it may be corroborated with concentration of influent parameters and amount of chemical used for treatment of effluent of the industry. The study may be conducted within 15 days and necessary action on the recommendations of the Special Team may be taken under the provisions of the Water Act 1974, under intimation to the Monitoring Committee.

4. M/s Ramal Dyeing Jalandhar bye pass, Opp. Shakti Nagar, Ludhiana.

4.1 Background

The industry is a small-scale red category-dyeing unit and has been granted consent under the provisions of Water Act, 1974 vide no. CTOW/Renewal/LDH1/2018/7462252 dated 05.05.2018 valid upto 30.06.2023. The industry is engaged in the process of dyeing of cloth @ 2000 Kgs/day on job basis using dyes &chemicals as raw material. The manufacturing process of the industry are: Raw Material → Dyeing → Finishing → Drying → Ready → Packing → Dispatch.

The quantity of effluent generated by the industry is 350 m^3/day. For the treatment of effluent generated by the industry, it has provided ETP consisting of the components viz collection tank, dozing/reaction channel, primary tube settlers, bio-reactor, secondary tube settler, pre-filtration tank, dual media filters etc. The treated effluent is discharged into municipal sewer. The officers of PPCB has claimed that the industry has adopted wastewater minimization techniques and is using its pre-filtration tank effluent for mixing of dosing chemicals, re-circulating the cooling water in the process and re-using the steam condensate in the boiler. The industry has applied for permission to abstract ground water for industrial use with Central Ground Water Authority (CGWA) with application no. 21-4/1120/PB/IND/2017.

4.2 Visit to the industry

The monitoring committee visited the industry on 15.11.2019. The industry is engaged in the process of dyeing of cloth on job basis using dyes & chemicals as raw material.

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The manufacturing processes of the industry are raw material → dyeing → finishing → drying → ready → packing → dispatch. It has provided effluent treatment plant (ETP) consisting of the components namely collection tank, dozing/reaction channel, primary tube settlers, bio-reactor, secondary tube settler, pre-filtration tank, dual media filters etc. The treated effluent is discharged into municipal sewer. The industry has installed flow meters at the inlet of water supply and its final outlet of ETP. The sludge room was found empty during visit. The representative of the industry informed that they have recently got lifted its sludge to TSDF Nimbuan.

The industry produced the copy of the manifest, which indicates that, it has lifted 3400 kg of sludge vide no. 30260 dated 23.09.2019 to TSDF Nimbuan. About 80 bags, containing wet sludge, were found stacked near the filter press area. The record of operation of its ETP was produced by the industry to the Monitoring Committee.

The representative of the industry also claimed that it is adopting wastewater minimization techniques. It is re-circulating the cooling water back into the process and are using steam condensate recovery in the boiler and by doing so, it is saving water as well as fuel used in the boiler for burning. The sludge is generated by the industry is lifted to TSDF Nimbuan. The industry needs to improve the housekeeping immediately.

4.2.1 Collection of effluent samples

During visit, the effluent samples from the following points were collected and sent to Punjab Pollution Control Board, Laboratory, Patiala for analysis:-

a) Collection Tank (Inlet of ETP)

b) Pre-filtration tank

c) Final outlet leading to sewer

The analysis results, as received from PPCB laboratory, are annexed as per **Annexure-4**. These analysis results are mentioned as per Table-4 given below: -

Table-4 : Analysis results of effluent samples

Sr. No.	Parameters	Inlet to ETP	Pre-filtration Tank	Outlet to ETP
1.	pH	8.2	11.6	7.5
2.	COD, mg/l	610	256	164
3.	BOD, mg/l	208	62	35
4.	TSS, mg/l	372	180	106
5.	Ammn. Nitrogen, mg/l	BDL	BDL	BDL
6.	TDS, mg/l	3959	4034	3154
7.	Phenolic Compounds, mg/l	BDL	BDL	BDL
8.	Sulphides, mg/l	2.4	2.0	1.0
9.	T.Cr., mg/l	BDL	BDL	BDL
10.	SAR	21.O	23.9	36.4
11.	Oil & Grease, mg/l	BDL	BDL	BDL

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4.2.2 Discussion on the analysis results and observations of the Committee:

As per the analysis results, the values of pH, COD, BOD, TSS, Amm Nitrogen, TDS, Phenolic Compounds, Sulphides, Total Chrome, SAR and Oil & Grease in the untreated effluent were observed to be 8.2, 610 mg/l, 208 mg/l, 372 mg/l, BDL, 3959 mg/l, BDL, 2.4 mg/l, BDL, 21.0 mg/l and BDL.

At the pre-filteration tank, the values of the parameters were observed as pH: 11.6, COD:256 mg/l, BOD: 62 mg/l, TSS:180 mg/l, Amm Nitrogen: BDL, TDS: 4034 mg/l, Phenolic Compounds: BDL, Sulphides:2.0 mg/l, Total Chrome: BDL, SAR: 23.9 mg/l and Oil & Grease: BDL.

The values of the parameters at the outlet of the effluent treatment plant were found as pH: 7.5, COD:164 mg/l, BOD: 35 mg/l, TSS:106 mg/l, Amm Nitrogen: BDL, TDS: 3154 mg/l, Phenolic Compounds: BDL, Sulphides:1.0 mg/l, Total Chrome: BDL, SAR: 36.4 mg/l and Oil & Grease: BDL.

The overall treatment efficiency of the effluent treatment plant in terms of removal of COD, BOD, TSS and Sulphides was observed as 73.1%, 83.2%, 71.5% and 58.3% respectively. However, the values of BOD: 35 mg/l, TDS: 3154 mg/l and SAR: 36.4 are higher than the permissible limits of BOD: 30 mg/l, TDS: 2100 mg/l and SAR: 26.0.

4.2.3 Recommendations of the Monitoring Committee

In view of the analysis results and observations of the Monitoring Committee, the following recommendations are made:

Chairman Punjab Pollution Control Board shall initiate action to issue directions under the provisions of the Water Act, 1974 to the industry as under:

1. Impose an environment compensation amounting to Rs 35 Lakh upon the industry. The said amount may be utilized rejuvenation of quality of river Sutlej water.
2. To revoke the consent granted to the industry under the provisions of Water Act, 1974.
3. The industry shall upgrade its effluent treatment plant to meet with the prescribed standards within 3 months
4. The production capacity of the industry may be reduced by 20% till the upgradation in the existing ETP is made by the industry and it achieves the standards prescribed by Punjab Pollution Control Board / MoEF&CC.

With regard to recommendations made by the Monitoring Committee in case of each industry as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National

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Green Tribunal in para no. 16 of order dated 16.7.2019 in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

Dr. Babu Ram

Sant Balbir Singh Seechewal

S.C Agrawal

Justice Jasbir Singh, Former Judge Punjab & Haryana High Court, Now as Chairman of the Monitoring Committee

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA

FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Annexure-1

Report No 86-88
Dated 26.11.2019

I hereby certify that I, Surinder Singh, State Board Analyst duly appointed under sub section (3) of section 53 of the water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) received on the 15th day of November, 2019 from Sh. Gurkaran Singh AEE, samples of M/s Om Processors Pvt. Ltd. K-3, Industrial Area-A, Textile Colony, Ludhiana for analysis. The samples were in a condition fit for analysis reported below :-

I further certify that I have analysed the aforementioned samples from 15.11.2019 to 26.11.2019 and declare the results of the analysis reported below :-

The analysis has been made as per methods given in relevant parts of I.S. 3025, Indian Standard Methods and test for industrial effluents. The details of the analysis are as follows :-

Point of sample collection :- As per data Sheet

Sr. No	Parameters	Collection tank	Pre-filtration tank	Outlet of ETP
1	pH	9.96	11.54	9.66
2	COD mg/l	305	152	179
3	BOD mg/l	102	40	28
4	TSS mg/l	180	54	38
5	TDS mg/l	6710	4367	4270
6	Total Chromium mg/l	BDL	BDL	BDL
7	Colour, Co-pt units	150	10	10
8	Phenols mg/l	BDL	BDL	BDL
9	SAR	48.3	30.2	27.9
10	Ammonia mg/l	BDL	BDL	BDL
11	Sulphide mg/l	1.2	1.8	1.8
12	Oil & grease mg/l	BDL	BDL	BDL

Note 1) All the results are in mg/l except pH, SAR, Colour
2) Entire sample was consumed in Testing

The condition of the seals, fastenings and containers on receipt was as follows :-

Seals & fastenings of the containers were found intact
Signed this 26th day of November, 2019
Address :-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road
Patiala

(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-I, Ludhiana

Authorisation Letter No :-

Endst No 2608 Z SI

Dated :-

at 26-11-19

A copy of the above is forwarded to the
1. The Chairman, Office of Executive Committee, Sin Tower, 4th Floor, Forest Complex, Sector 68, Mohali
2. Sr. Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Ludhiana

(Signature)
State Board Analyst

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Annexure - 2

Annexure - 2

E-2019

POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No.	E-1471-1473/ILCLab. Monitoring/2019
2. ULR No	ULR-TC704518000000001602P
3. Name of Industry	M/s Oriental Knit Fab. Pvt. Ltd. 278 M, Industrial Area-A, Ludhiana
4. Name of Sample collecting Officer	Er. Girishan Rai, CEE, Er. A.K. Kalsi, SEE, Er. Sandeep Behal, SEE, Er. R.K. Ratra, SEE, Er. Atul kaushal, AEE along with NGT Monitoring Committee
5. Designation of the officer authorizing Test	Environmental Engineer, Regional Office, Ludhiana
6. Type of Sample	Grab
7. Date & Time of Sample collection	15.11.19
8. Date & Time of Sample receipt in Lab.	15.11.19
9. Period of Analysis	15.11.19 to 25.11.2019
10. Test Methods	As per relevant parts of IS:3025/Methods of APHA

Results

Sr. No.	Parameters	Inlet of ETP	Pre filtration sump well	Outlet
1.	pH	8.81	9.48	8.40
2	Total Suspended Solids mg/l	286	136	44
3	Total Dissolved Solids mg/l	2890	3630	2070
4	Chemical Oxygen Demand mg/l	210	108	90
5	Bio-chemical Oxygen Demand mg/l	64	26	19
6	*Ammonical Nitrogen as N mg/l	5.4	3.6	2.1
7	Sulphide mg/l	3.0	1.2	BDL
8	Phenolic Compound mg/l	BDL	BDL	BDL
9	*Sodium Absorption Ratio	21.2	44.39	13.70
10	Total Chromium mg/l	BDL	BDL	BDL
11	*Oil & Grease mg/l	5.0	BDL	BDL

* Not covered under scope of EMS

-- End of Report --

Analyzed by

Scientific Officer 25/11/19

Endst. No. 36314-17 Dt. 29/11/2019

A copy of the above is forwarded to the:-

1. The Chairman ,Office of NGT Monitoring Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali
2. The Member Secretary, Punjab Pollution Control Board Patiala
3. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office,-I, Ludhiana
4. The Environmental Engineer, Punjab Pollution Control Board, Regional Office-I, Ludhiana.

Asstt. Scientific Officer
29/11/2019

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

Annexure-3

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No
Dated

I hereby certify that I Meenu Sharma, State Board Analyst duly appointed under sub section (3) of section 53 of the water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) received on the 15th day of Novemeber, 2019 from Sh. Gurkaran Singh, AEE & Sh. Lalit Kumar, FA, sample of M/s Sun Shine Dyeing Pvt. Ltd, 261, Industrial Area-A, Ludhiana for analysis. The sample was in a condition fit for analysis reported below -

I further certify that I have analysed the aforementioned samples from 15.11.2019 to 25.11.2019 and declare the results of the analysis reported below -

The analysis has been made as per methods given in relevant parts of I.S. 3025 Indian Standard Methods and test for industrial effluents. The details of the analysis are as follows -

Point of sample collection - As per data Sheet

Parameters	Inlet of ETP	From Pre-Filtration tank	Outlet of ETP
pH	8.86	8.26	8.09
Total Suspended Solids mg/l	120	77	30
Total Dissolved Solids mg/l	3560	2082	1986
Colour Co-Pt Units	300	20	10
Chemical Oxygen Demand mg/l	120	80	66
Bio-chemical Oxygen Demand mg/l	34	26	20
Phenolic Compounds mg/l	BDL	BDL	BDL
Ammonical Nitrogen mg/l	10.4	5.0	3.0
Sodium Absorption Ratio	8.8	6.0	5.2
Total Chromc mg/l	0.24	BDL	BDL
Sulphide mg/l	4.0	1.8	BDL
*Oil & Grease mg/l	BDL	BDL	BDL

Note 1) All the results are in mg/l except pH, SAR

2) Entire sample was consumed in Testing

The condition of the seals, fastening and container on receipt was as follows -

Seals & fastenings of the container were found intact
Signed this 25th day of November, 2019
Address -

Punjab Pollution Con trol Board
Vatavaran Bhawan, Nabha Road,
Patiala

no 35992
27/11/2019

(Signature) 25/11/19
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-I, Ludhiana

Authorisation Letter No -

Dated -

Endst No 35993-94

dt 27/11/2019

A copy of the above is forwarded to the -
1 The Chairman Office of Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali
2 Sr. Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Ludhiana

(Signature) 25/11/19
State Board Analyst

Annexure-4

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No.	E 1468-1470 HO Lab. Monitoring/2019
2. ULR No.	TC704518000000001601P
3. Name of Industry	M/s Ramal Dyeing, Jalandhar Bypass, Chandigarh Road, Ludhiana
4. Name of Sample collecting Officer	Er Jaspal Singh, AEE
5. Designation of officer authorizing Test	EE, RO SAS Nagar.
6. Type of Sample	Grab
7. Date & Time of Sample collection	14.11.19
8. Date & Time of Sample receipt in Lab.	15.11.19
9. Period of Analysis	14.11.19 to 24.10.19
10. Test Methods	As per relevant parts of IS:3025 IS:1622 & Method of APHA

Results

Sr. No.	Parameters	Inlet	Pre-filteration Tank	Outlet
1	pH	8.2	11.6	7.5
2	Chemical Oxygen Demand mg/l	616	256	164
3	Bio-chemical Oxygen Demand mg/l	208	62	35
4	Total Suspended Solids mg/l	372	180	106
5	*Amm. Nitrogen mg/l	BDL	BDL	BDL
6	Total Dissolved Solids mg/l	3959	4034	3154
7	*Phenolic Compounds mg/l	BDL	BDL	BDL
8	*Sulphides mg/l	2.4	2.0	1.0
9	T.Cr mg/l	BDL	BDL	BDL
10	*SAR	21.0	23.9	36.4
11	*Oil & Grease mg/l	BDL	BDL	BDL

*Not covered under the scope of NABL

-- End of Report --

Analyzed by

Scientific Officer

Endst. No: 3621-2

Dt: 28/11/2019

A copy of the above is forwarded to Dr. Babu Ram, Member, Executive Committee, Office of Executive Committee, Tower no. 5, 4th Floor, Forest Complex, Sector-68, SAS Nagar for information and further necessary action please.

Jr. Scientific Officer

Annexure-5

OFFICE THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.916/2018 (earlier OA No.101 of 2014) OA No.606 of 2018 and OA No.1040 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: sutlejbeasriver@gmail.com

To

1. The Chairman,
Punjab Pollution Control Board,
Patiala

2. The Chairman,
Himachal Pradesh Pollution Control Board,
Shimla

3. The Director,
Himachal Pradesh State Industrial Development Corporation,
Shimla

4. The Commissioner,
Municipal Corporation,
Pathankot

5. The Superintending Engineer,
BBMB,
Talwara

6. The Senior Environmental Engineer
Punjab Pollution Control Board,
Zonal Office,
Jalandhar

7. The Senior Environmental Engineer
Punjab Pollution Control Board,
Zonal Office,
Amritsar

8. The Executive Officer,
Municipal Council,
Dasuya

9. The Executive Officer,
Municipal Council,
Talwara

No. CMC/SB/2019/ 239
Dated: 23.12.2019

Subject: **Report on Visit to Dasuya, Talwara and Pathankot area by the Monitoring Committee constituted by Hon'ble NGT in OA no. 916/2018 in the matter of Sobha Singh Vs. State of Punjab and Others and OA no. 606/2018 in the matter of compliance of Solid Waste Management Rules, 2016 on 20.11.2019 and 21.11.2019.**

Please find enclosed herewith a report on Visit to Dasuya, Talwara and Pathankot area by the Monitoring Committee constituted by Hon'ble NGT in OA no. 916/2018 in the matter of Sobha Singh Vs. State of Punjab and Others and OA no. 606/2018 in the

matter of compliance of Solid Waste Management Rules, 2016 on 20.11.2019 and 21.11.2019 for your kind information and necessary action.

It is requested that necessary action on the recommendations made by the Monitoring Committee in the case of each industry relating to your office may be taken and action taken report be submitted within 21 days.

DA/as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Endst No. CMC/SB/2019/ Dated: 23.12.2019

A copy of the above is forward to the Additional Chief Secretary, Department of Environment, Science & Technology, Shimla for information and necessary action please.

DA/as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Endst No. CMC/SB/2019/ Dated: 23.12.2019

A copy of the above is forward to the Principal Secretary to Government of Punjab, Department of Science, Technology and Environment, Chandigarh for information and necessary action please.

DA/as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Endst No. CMC/SB/2019/ Dated: 23.12.2019

A copy of the above is forward to the Principal Secretary to Government of Punjab, Department of local Government, Chandigarh for information and necessary action please.

DA/as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Report on Visit to Dasuya, Talwara and Pathankot area by the Monitoring Committee constituted by Hon'ble NGT in OA no. 916/2018 in the matter of Sobha Singh Vs. State of Punjab and Others and OA no. 606/2018 in the matter of compliance of Solid Waste Management Rules, 2016 on 20.11.2019 and 21.11.2019.

The following were present during the visit:-

A) Members of the Monitoring Committee

S.N.	Name and Designation of the officer	Designation in the Committee
1.	Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court	Chairman
2.	Sh. S.C. Aggarwal, IAS, Former Chief Secretary, Punjab	Senior Member
3.	Sant Balbir Singh Seechewal	Member
4.	Dr. Babu Ram, Former Member Secretary, PPCB	Member

B) The list of Officers of other departments is annexed as per **Annexure-1**

1.0 Sewage Treatment Plant, Dasuya

It was informed that present population of the Dasuya Town is about 32000. The generation of sewage is about 3.5 MLD. For the treatment of Sewage of Dasuya Town, STP of capacity of 4 MLD based on Waste Stabilisation Pond (WSP) has been installed and presently 2.5 MLD Sewage is being treated in the STP, as such, about 1 MLD of untreated sewage is being discharged into the drain. This drain has been plugged by providing temporary barrier in it. Further, 2 ponds treatment system (facultative followed by maturation ponds) based on Seechewal Model has been provided. From this drain, the effluent is lifted through pump to discharge the same into the facultative pond. The treated sewage of this treatment system alongwith treated sewage of STP is utilized for irrigation of agricultural crops in the nearby area. The Committee was informed that out of total 7 ponds of STP, sludge from 2 ponds has been extracted and rest of the ponds are still filled with sludge.

1.1 Collection of effluent samples:

During visit, effluent samples from the following points were collected:-

i) Untreated sewage.

ii) Outlet of STP.

These effluent samples have been sent to Punjab Pollution Control Board Laboratory, for analysis of the various parameters. The analysis results, as received from the PPCB laboratory, are annexed as per **Annexure-2.**

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These analysis results are mentioned as per **Table -1** given below:

Table -1

Sr. No.	Parameters	Inlet to STP	Outlet of STP
1.	pH	7.3	7.4
2.	BOD, mg/l	65	25
3.	TSS, mg/l	168	38
4.	F.Coli, MPN/100 ml	26000	930

1.1.1 Discussion on the analysis results

Analysis results indicate that the values of BOD and TSS in the untreated effluent were observed to be 65 mg/l and 168 mg/l, respectively. The concentration of these parameters in the treated effluent were observed to be BOD : 25 mg/l and TSS : 38 mg/l. The treatment efficiency in terms of removal of BOD and TSS was observed to be 61.5% and 77.4%, respectively. Also, the values of BOD : 25 mg/l and TSS : 38 mg/l in the treated sewage was within the permissible of BOD: 30 mg/l and TSS : 100 mg/l.

With regard to the values of BOD and TSS in the untreated sewage, it is mentioned here that literature study indicates that the values of these parameters viz BOD and COD very between 125 to 325 mg/l and 206 to 560 mg/l, respectively [M.N. Rao and A.K. Datta : wastewater treatment (3^{rd} edition : PP-3)]. In another study, conducted by Sahu et al, 2013 : characterization of domestic wastewater of Bhubaneswar, Odisha, the values of BOD and TSS were mentioned as 105-120 mg/l and 338-345 mg/l, respectively. Further as per manual for treatment of sewage, one person contributes to BOD load of 27gm/capita/day. If the wastewater discharge to the tune of 108 l/capita/day (0.8x135lpcd) is considered, the concentration of BOD in the untreated domestic comes out to be 27x1000mg/capital/day ÷ 108l/capital/day = 250 mg/l. Therefore, it is evident that concentration of BOD in the untreated sewage is a function of water consumption per capita per day.

Also, as per analysis results, the values of F coil parameters at the inlet and outlet of STP were mentioned as 26000 MPN/ 100ml and 930 MPN/ 100ml, respectively. In this regard, it is mentioned here that no mechanism in the form of imparting hypo solution or disinfectant dosing has been provided at STP. Therefore, there is no possibility of reducing F. Coli parameters from 26000 MPN/100 ml to 930 MPN/ 100 ml the value of F. Coli

Thus, the domestic wastewater sample collected from the inlet of sewage treatment plant showing BOD and COD values as 65 mg/l and 168 mg/l is not representative one and there is need to carry out comprehensive study with composite samples by

collecting 4 hourly samples for 24 hours for 2 days of untreated & treated sewage of Dasuya town. In the said comprehensive study, all the parameters of domestic wastewater including F. Coli parameter may be analyzed.

1.2 Observations and recommendations / directions of the Monitoring Committee:

During visit, the following observations and recommendations were made:

i) About 1 MLD untreated sewage is being discharged into drain, which is further taken temporarily into 2 ponds treatment system based on Seechewal Model by lifting the same from the drain. Monitoring Committee recommends that the sewage network may be laid down in the unsewered area by 28.2.2020 so that untreated sewage may also taken into existing STP.

ii) Two outlets, maintained to discharge the treated sewage into drain, may be closed by 31/12/2019.

iii) Only one lifting pump has been provided to lift the effluent from the drain into 2 ponds treatment system. It was felt that there is need to provide one additional lifting pump as an alternative arrangement. The Monitoring Committee directed the Executive Officer, Municipal Council, Dasuya to purchase one additional pump by 31/12/2019.

iv) All the remaining ponds of existing STP, presently being filled with sludge, may be cleaned by 15/02/2020 and the sludge so generated must be handled and dispose of in an environmentally sound manner after getting it analysed for the parameters mentioned in schedule II of the Solid Waste Management Rules, 2016 and record of its disposal must be maintained.

v) No arrangements have been made to impart chlorination / disinfectant dosing to the treated effluent of STP. The Monitoring Committee directed the Executive Officer, Municipal Council, Dasuya to provide chlorination/ disinfectant dosing system within 4 months.

vi) The Chairman, PPCB shall depute a team to carry out comprehensive study of sewage treatment plant by collecting 4 hourly composite samples of untreated and treated sewage for 24 hours for 2 days. In the said comprehensive study, all the parameters of domestic wastewater including feacal coliform at the inlet and outlet of STP may be analysed. The team shall submit its report within 15 days to the Chairman, PPCB and he shall take appropriate action on the recommendations of the team as per law and under the provisions of the Water Act, 1974.

2.0 BBMB STP of capacity 8 MLD.

For the treatment of sewage of BBMB, Talwara sewage treatment plant (STP), of capacity 8 MLD has been installed. The Monitoring Committee visited 8 MLD STP on 20/11/2019. The STP is based on SBR Technology. Presently, about 4 MLD Sewage is being treated in the said STP. At the time of visit, very nominal quantity of sludge was found at the bottom of centrifuging system, which indicated that there is irregular operation of STP. The record of the sludge was seen by the Committee and it was observed that about 20-25 Kg per day sludge is generated which is quite low. On one corner of chlorine contact tank, a plastic container was placed which was told to be containing hypo solution to impart chlorine dosing in the system. However, the container was not containing any hypo solution.

2.1 Collection of effluent samples:

During visit, untreated and treated sewage samples were collected and the same were sent to PPCB Laboratory, for analysis. The analysis results of the effluent samples, as received from PPCB laboratory, are annexed as per **Annexure-3.** These analysis results are mentioned as per **Table-2** given below:

Table-2

Sr. No.	Parameters	Inlet to STP	Outlet of STP	Aeration tank
1.	pH	6.7	7.2	--
2.	BOD, mg/l	50	16	--
3.	TSS, mg/l	42	20	--
4.	MLSS, mg/l	--	--	910
5.	F.Coli, MPN/100 ml	17000	820	--

2.1.1 Discussion on the analysis results:

The analysis results indicate that the values of BOD and TSS in the untreated effluent were observed to be 50 mg/l and 42 mg/l, respectively. The concentration of these parameters in the treated effluent was observed to be BOD : 16 mg/l and TSS : 20 mg/l. The treatment efficiency in terms of removal of BOD and TSS was observed to be 68% and 52.3%, respectively. Also, the values of BOD : 16 mg/l and TSS : 20 mg/l in the treated sewage were within the permissible of BOD: 30 mg/l and TSS : 100 mg/l.

With regard to the values of BOD and TSS in the untreated sewage, it is mentioned here that literature study indicates that the values of these parameters viz BOD and COD very between 125 to 325 mg/l and 206 to 560 mg/l, respectively [M.N. Rao and A.K. Datta : wastewater treatment (3rd edition : PP-3)]. In another study, conducted by Sahu et al, 2013: characterization of domestic wastewater of Bhubaneswar, Odisha, the values of BOD and TSS were mentioned as 105-120 mg/l and 338-345 mg/l, respectively.

Also, as per analysis results, the values of F. Coli at the inlet and outlet of STP were mentioned as 17000 MPN/100ml and 820 MPN/100ml, respectively. However it is not clear as to how the value of F. Coli can be reduced to 820 MPN/100ml from 17000 MPN/100ml without imparting any chlorine dosing in the system.

Thus, the domestic wastewater sample collected from inlet to sewage treatment plant with BOD and COD values as 50 mg/l and 42 mg/l is not representative one and there is need to carry out comprehensive study with composite samples by collecting 4 hourly samples for 24 hours for 2 days of untreated & treated sewage of BBMB, Talwara. In the said comprehensive study, all the parameters of domestic wastewater including F. Coli parameter may be analysed.

2.2 Observations and recommendations of the Monitoring Committee:

1. During visit, it was observed that small quantity of sludge was observed at the bottom of centrifuging system, which indicated that the BBMB does not operate its STP regularly. Monitoring Committee recommends that BBMB authority or operator of STP shall maintain daily record of MLSS and MLVSS in the aeration tank, amount of sludge withdrawn from the underflow of secondary clarifier to maintain required concentration of biomass in the aeration tank, amount of sludge after decanting into centrifugal system and quantity of sludge lifted by the farmers or any other scientific disposal of the sludge. Daily record of parameters namely BOD, COD and TSS in the untreated and treated sewage may be maintained.

2 During visit, it was observed that the container placed at one corner of the chlorine contact tank was empty, which indicated that no chlorination to the sewage is being imparted to reduce the value of F.Coli parameter and to bring it within the norms. However, as per analysis results, the values of F. Coli at the inlet and outlet of STP were found as 17000 MPN/100ml and 820 MPN/100ml, respectively. However, it is not clear as to how the values of F. Coli has been reduced to 820 MPN/100ml from 17000 MPN/100ml without imparting any chlorine dosing in the system.

3. The Chairman, PPCB shall depute a team to carry out comprehensive study of sewage treatment plant by collecting 4 hourly composite samples of untreated and treated sewage for 24 hours for 2 days. In the said comprehensive study, all the parameters of domestic wastewater including feacal coliform at the inlet and outlet of STP may be analysed. The team shall submit its report within 15 days to the Chairman, PPCB and he shall

take appropriate action on the recommendations of the team as per law and under the provisions of the Water Act, 1974.

4. The treated sewage of BBMB, Talwara may be utilized for gardening/plantation/irrigation purposes.

3.0 Management of Solid Waste of BBMB, Talwara:

3.1 Observations and directions of the Monitoring Committee:

On the way to visit to STP, the Monitoring Committee observed that a lot unmanaged and non segregated solid waste was found thrown along the road. The Monitoring Committee took a serious view in this regard. On enquiry, it came to the notice of the Monitoring Committee that the said solid waste was disposed off by the Municipal Council, Talwara. Therefore, the President along with Municipal Councillors of Municipal Council, Talwara were called on 20/11/2019 at the site and they were directed as under :

i) M.C., Talwara shall arrange suitable piece of land for effective management of Solid Waste by 31.3.2020.

ii) Door to door collection of solid waste may be started by 31/12/2019.

iii) Segregation of the solid waste at source may be started by 31/12/2019.

iv) To convert the wet waste into compost, atleast five compost pits may be provided by 31/12/2019.

v) Dry waste should also be segregated to recover the material such as paper, wooden logs, plastic items, iron pieces etc. by providing atleast one material recovery facility by 31/1/2020.

vi) M.C. Talwara shall provide brick wall of appropriate height solid and green belt of appropriate width all around the Solid Waste dumping site as per the provisions of the MSW Rules, 2016 by 30.6.2020.

4.0 Installation of STP to treat sewage of Talwara Town:

4.1 Observations of the Monitoring Committee :

The Monitoring Committee was informed that the present population of Talwara Town is about 21000. The quantity of sewage discharge of the Municipal Council is about 3 MLD. Presently, the untreated sewage is discharged into River Beas. The President and other representatives of the Municipal Council, Talwara informed that no land is available with M.C. Talwara for installation of STP for treatment of sewage of Talwara Town.

4.2 Recommendations/directions of the Monitoring Committee :

The following recommendation / directions are given by the Monitoring Committee :

1. M.C., Talwara shall make request to Deputy Commissioner, Hoshiarpur and Director Local Govt. to facilitate the Municipal Council to provide suitable piece of land for STP. In the meanwhile, Monitoring Committee may also write a letter to the Principal Secretary, Department Local Government to take up the matter with BBMB authorities to provide suitable piece of land for installation of STP and management of solid waste of MC, Talwara.
2. M.C., Talwara shall prepare proposal and detailed project report (DPR) for installation of STP by 31/12/2019.
3. Funds for installation of STP shall be tied up by 28/2/2020.
4. Tender for installation of STP shall be floated by 31/3/2020.
5. STP shall be completed and commissioned by 31/3/2021.

The Chairman, PPCB shall initiate action to issue necessary directions under the provisions of the Water Act, 1974 to complete the above activities within the time schedule as mentioned above.

5.0 Sewage treatment plant of capacity 27 MLD at Pathankot:

The Monitoring Committee visited 27 MLD STP at Pathankot on 20/11/2019 and made the following observations:

1. The present population of Pathankot is 2,45,000.
2. Municipal Corporation, Pathankot has installed STP of capacity 27 MLD.
3. Presently, about 8 MLD sewage has been taken into single line of components of STP.
4. At STP site, only one unit of aeration tank out of two units was in operation and aeration process in one of the aeration tank was going on. The last tank of ETP, which is called as chlorine contact tank was full of wastewater and small quantity of wastewater was flowing into water body.
5. During visit, it was observed that STP was not made fully operational and it was just on the trial run, which is a serious issue as the untreated sewage is being discharged into water body leading to River Beas, thereby, affecting the water quality of river and aquatic life.

5.2 Recommendations/directions of the Monitoring Committee:

1. The Chairman of the Monitoring Committee directed that stabilization, commissioning and operational processes of all the components of sewage treatment plant shall be completed within one month, failing which an environment compensation @ Rs. 50,000/- per day shall be imposed for 15 days period and after these 15 days, if sewage treatment plant is still

not commissioned, environmental compensation of Rs.1.00 lacs per day may be imposed on M.C., Pathankot and PWSSB on 50:50 basis.

2. Presently, about 20% of the untreated sewage of Pathankot city is being discharged without any treatment. The M.C., Pathankot shall lay sewerage network in the area which is without any sewerage system and it may be routed to 27 MLD STP by 31/3/2020. However, in case due to non-feasibility, it is not possible to carry untreated sewage to said STP, Municipal Corporation shall construct new STP of adequate capacity by 31/12/2020.

3. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Amritsar shall check the operational status of 27 MLD STP at Pathankot on 25/12/2019 and collect the untreated and treated sewage samples of STP and submit its report alongwith the recommendations to Chairman, PPCB to take necessary action in the matter under intimation to the Monitoring Committee.

6.0 Friends Paper Mills, IGC, Pathankot:

6.1. Background:

The industry, a medium scale unit, is located at Plot No. C-3 to C-5, Industrial Growth Centre, Tehsil & Distt. Pathankot and is engaged in the manufacturing of Kraft Paper @ 60 MTD by using old waste paper @ 56 MTD & Kraft Paper cutting @ 19 MTD.

6.2. Visit to the industry and observations of the Monitoring Committee:

The representative of the industry informed as under:

1. The industry was granted Environmental Clearance by State Competent Authority vide No. CSA/2016/F/338 dated 29.04.2016 for the manufacturing of Media / Craft Paper @ 60 MTD by using waste paper / imported kraft paper cuttings subject to certain conditions.
2. The industry was granted one time authorization for import of paper, paper board & paper product wastes, listed in part D of schedule 3 of hazardous & other waste (Management & Transboundry Movement) Rules, 2016, subject to certain conditions.
3. The industry was granted consent to operate under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 on 21/11/2016, and the same are valid upto 31/03/2021.
4. The industry has submitted its application in the office of Central Ground Water Authority for permission to withdraw ground water.
6. During the visit, the representative of the industry claimed that no effluent is discharged by the industry and whole of the effluent is recycled back into the

processes of the industry. For the recovery of fibre, it has installed dissolved Air floatation system.

6.3. Recommendations of the Monitoring Committee:

Though, the representative of the industry claimed that whole of the wastewater generated by the industry is recycled back into the process and no effluent is discharged, however, the Monitoring Committee was of the view that the industry may discharge its purge water after recycling the effluent number of times. As such, the Monitoring Committee recommended that Chairman PPCB shall depute a team headed by Senior Officer of the Board to monitor the industry comprehensively to ascertain as to whether the industry is actually achieving the Zero liquid discharge. The PPCB team shall check the water balance statement of the industry and waste material produced by it.

7.0 M/s Pioneer Industries Ltd., (Gluten Div.), Plot A2-A3, IGC, Defence Road, Pathankot:

7.1. Background:

As per record of PPCB, the industry a large scale unit, located at Plot No. A-3, A-4, Industrial Growth Centre, Defence Road, VPO Ranipur, Pathankot, is engaged in the manufacturing of Starch-A @ 72 TPD, Starch-B @ 24 TPD, Gluten @ 13.2 TPD, Pentaosne @ 10.8 TPD, Vanaspati & Refined Oil @ 100 TPD, Liquid Glucose @ 50 TPD, MDP @ 45 TPD by using wheat flour @ 182 TPD, raw oils @ 100 TPD. It has been granted Environmental Clearance under the EIA notification dated 14.09.2006 vide no. J-1101/38/2010-IA II (I) dated 07.12.2012 for enhancement of production capacity of the unit from 50 KLD to 125 KLD subject to the suitable conditions mentioned therein.

The industry discharges trade effluent about 311 KLD and domestic effluent about 10 KLD and treated effluent is discharged on to land for plantation. The industry has also been granted consent to operate under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 which are valid upto 31/03/2022. It has also been granted authorization under Hazardous Waste Management Rules, 2016 for the storage and disposal of hazardous waste, which is valid upto 31/03/2021.

7.2. Visit to the industry:

The Monitoring Committee visited the industry on 20/11/2019 and it was observed that for the treatment of its effluent, it has provided an effluent treatment consisting of collection tank, buffer tank, tube settler, aeration tank-1, secondary clarifier-1, aeration tank-2, secondary clarifier-2, aeration tank-3 and secondary clarifier-3, final collection tank, multi grade filter, activated carbon filter. The treated wastewater is discharged onto land for irrigation measuring about 20 acres.

During visit, the effluent samples from the following points were collected and these samples were sent to PPCB Laboratory for analysis:

i) Collection tank.
ii) Outlet of UASB.
iii) Aeration tank-1 for MLSS and MLVSS.
iv) Aeration tank-2 for MLSS and MLVSS.
v) Outlet of ETP.
vi) Plantation area

These analysis results are mentioned as per **Table-3** given below:

Table-3: Analysis results of the effluent samples:

S.N	Parameter	Inlet	Aeration Tank-1	Aeration Tank-2	Aeration Tank-3	UASB digestor	Outlet of ETP	Plantation area
1	pH	3.4	-	-	-	6.85	7.9	7.21
2	TSS, mg/l	788	-	-	-	170	60	40
3	COD, mg/l	9848	-	-	-	390	152	104
4	BOD, mg/l	4250	-	-	-	125	45	35
5	TDS, mg/l	850	-	-	-	2670	903	670
6	O&G, mg/l	-	-	-	-	5.2	BDL	-
7	MLSS mg/l	-	1690	2420	2600	-	-	-
8	MLVSS mg/l	-	1240	1680	2090	-	-	-

The analysis results of the effluent samples are annexed as per **Annexure-4.**

7.2.1 Discussions on the analysis results:

The analysis results indicate that the values of the parameter namely pH, TSS, COD, BOD & TDS were observed as 3.4, 788 mg/l, 9848 mg/l, 4250 mg/l and 850 mg/l, respectively. The values of MLSS, MLVSS in the aeration tank-1, aeration tank-2 and aeration tank-3 were observed as 1690 mg/l, 1240 mg/l, 2420 mg/l, 1680 mg/l and 2600 mg/l, 2090 mg/l, respectively. The values of the parameters were reduced at the outlet of UASB reactor as TSS: 170 mg/l, COD: 390 mg/l, BOD: 125 mg/l. The values of TDS and O&G were found as 2670 mg/l and 5.2 mg/l, respectively. The treatment efficiency of UASB reactor in terms of reduction of parameters namely TSS, COD and BOD was observed as 78.4%, 96% and 97%, respectively.

After three stage aerobic biological treatment system, the values of TSS, COD and BOD were observed as 60 mg/l, 152 mg/l and 45 mg/l depicting the treatment efficiency as TSS (64.7%), COD (61%) and BOD (64%), respectively. However, the value of BOD detected as 45 mg/l at the outlet of ETP was higher than the permissible limit of 30 mg/l. Other parameters namely pH (7.9), TSS (60 mg/l), TDS (903 mg/l), and COD (152 mg/l), are within the permissible limits 5.5 to 9.0, 100 mg/l, 2100 mg/l and 250 mg/l, respectively. The values of these parameters in the effluent sample collected from plantation area were found as pH: 7.21, TSS: 40 mg/l, COD: 104 mg/l, BOD: 35 mg/l and TDS: 607 mg/l. The value of BOD (35

mg/l) in the effluent lying in the plantation area was higher than the permissible limit of 30 mg/l.

7.3 Recommendations of the Monitoring Committee:

Keeping in view the analysis results and observations of the Monitoring Committee, it is recommended that the Chairman, PPCB shall initiate action to issue directions under the provisions of the Water Act, 1974 as under:

1. An environment compensation amounting to Rs. 20 Lakh may be imposed upon the industry. The said amount may be utilized for rejuvenation of the quality of the environment.
2. To revoke consent to operate under the provisions of the Water Act, 1974.
3. The industry shall rehabilitate the components of effluent treatment plant within 3 months so that it may achieve the standards w.r.t all the parameters at all the times.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

8.0 Visit to Sansarpur Terrace Industrial Area, Phase 3, District Kangra, Himachal Pradesh on 20.11.2019 and 21.11.2019.

During visit to 8 MLD capacity STP of BBMB Talwara on 20.11.2019. some persons of Talwara area met Monitoring Committee and it was informed that the industries located at Sansarpur Terrace Industrial Area ,Phase 3, District Kangra, Himachal Pradesh are discharging their wastewater into river Swan leading to river Beas.

Accordingly, the Chairman of the Monitoring Committee directed the Environmental Engineer, Regional Office, Hoshiarpur to visit the Sansarpur Terrace area immediately to check as to whether any industry of Sansarpur Terrace area discharges its wastewater into river Swan or not.

Accordingly, Er. Surinder Singh Matharu, Environmental Engineer, Regional Office, Hoshiarpur and Er. Kamaljit Singh, AEE, Regional Office, Hoshiarpur visited, the course of Swan River from the bridge on Swan River on the Kangra-Talwara road to its upstream side. During inspection it was noticed as under:

1. A significant quantity of expired/non-expired drugs were seen burnt there and some unburnt drugs were seen lying there which were found manufactured by M/s CMG Biotech Pvt. Ltd ., 58- Industrial Area, Phase 3, Sansanrpur Terrace and

M/s Enrico Pharmaceuticals, 58- Industrial Area, Phase 3, Sansanrpur Terrace. The co-ordinates measured at this site were: 31°55'32" N and 75°54'39" E. Therefore, both these industries have violated the Bio Medical Waste Management Rules, 2016 intentionally & deliberately. Photographs showing the label on the packets of pharmaceutical tablets are mentioned as per **plates 1 and 2** given below:

Plate 1: Unburnt expired drugs showing the name CMG Biotech Pvt. Ltd

Plate 2: Burnt and unburnt bio medical waste lying in the bed of river Swan.

2. The team kept on walking along upstream side of river Swan and noticed that outfall of the sewerage system of Sansarpur Terrace area near the site mentioned in point no. 1, carrying wastewater which was finding its way into river Swan. Photograph taken during the visit is mentioned as per **Plate – 3** given below:

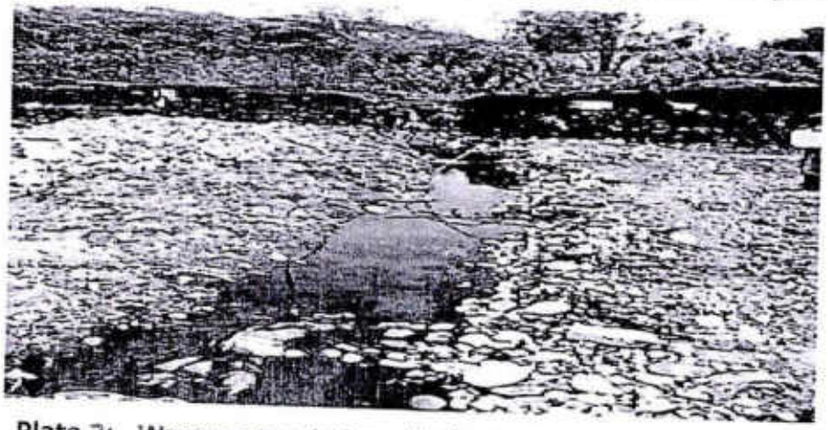

Plate 3: Wastewater being discharged through sewerage system of Industrial Area into river Swan

3. Thereafter, substantial quantity of discharge of wastewater was noticed on the backside of an industrial unit where the co-ordinates were measured as 31°55'30" N 75°55'23" E. The effluent sample of wastewater was collected and was sent to PPCB Laboratory at Patiala for analysis. The analysis results, as received from PPCB laboratory, are annexed as per **Annexure 5** and these results are given as **Table 4** given below:

Table-4: Analysis results of effluent samples

Sr.No.	Parameters	Results
1	pH	5.6
2	COD, mg/l	4200
3	BOD, mg/l	1630
4	TSS, mg/l	472
5	TDS, mg/l	789

Thereafter, the name of the unit was checked on its front side and the same was found to be written as M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area ,Phase 3, District Kangra, Himachal Pradesh on its main gate. The team did not visit the unit since it was located in the territory of Himachal Pradesh being not authorized to visit the unit in the territory of other State. The photographs showing the outlet of M/s Premier Alkobev Pvt Ltd, discharging wastewater in Swan river visit on 20.11.2019 are mentioned as per Plate 4 and 5

Plate 4: Outlet on backside of **M/s Premier Alkobev Pvt. Ltd., through which the wastewater was being discharged into river Swan**

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Plate 5: Photograph showing the team collecting sample of wastewater being discharged by M/s Premier Alkobev Pvt. Ltd on 20.11.2019 into river Swan

In the mean time the sunset started and the team had to conclude its visit. The entire facts, noted during visit on 20.11.2019, were informed telephonically to the Monitoring Committee and Senior Environmental Engineer, Zonal Office, Jalandhar.

8.1 Discussion on the analysis results

The analysis results indicate that the values of parameters were observed as pH: 5.6, COD: 4200 mg/l, BOD: 1630 mg/l, TSS: 472 mg/l, TDS: 789 mg/l which show that the industry namely M/s Premier Alkobev Pvt. Ltd, was discharging its untreated wastewater into river Swan and thus polluting the river Swan, leading to river Sutlej, thereby affecting the ecosystem

8.2 Visit to industries of Sansarpur Terrace, Industrial Area, District Kangra.

On 21.11.2019, the following Officers of the Punjab Pollution Control Board and Himachal Pradesh Pollution Control Board accompanied the Monitoring Committee visited the Sansarpur Terrace Industrial Area.

Punjab Pollution Control Board

1. Er. Harbir Singh, Senior Environmental Engineer, Zonal Office, Jalandhar.
2. Er. Surinder Singh Matharu, Environmental Engineer, Regional Office, Hoshiarpur.
3. Sh. Paramjit Singh, Junior Scientific Office, Zonal Lab, Jalandhar.

Himachal Pradesh Control Board

1. Er. Ajit Kumar Negi, Senior Environmental Engineer, HPPCB.
2. Er. Arun Gupta, Assistant Environmental Engineer, Dharamshala,HP.
3. Sh. Anup Vaidya, Senior Scientific Officer, Dharamshala, HP.

During the visit, the Monitoring Committee visited the Swan river and Sansarpur Terrace Industrial Area and the following observations and directions were made

1. The Monitoring Committee alongwith officers of State Boards visited the site where the Bio Medical Waste belonging to M/s CMG Biotech Pvt. Ltd ., 58-Industrial Area, Phase 3, Sansarpur Terrace and M/s Enrico Pharmaceuticals, 58-Industrial Area, Phase 3, Sansarpur Terrace was lying burnt.

   The Monitoring Committee directed the officers of HPPCB to initiate action against both these industries for gross violation of the provisions of the Bio Medical Waste Management Rules, 2016 framed under the Environment Protection Act, 1986.

2. A sample of wastewater from the outfall of the sewerage system of Sansarpur Terrace Industrial area through which the wastewater was being discharged into river Swan was collected by the officer of PPCB and HPPCB in the presence of Monitoring Committee and the officers of the State Boards (PPCB and HPPCB)

   The said sample was sent to PPCB laboratory for analysis. The analysis results, as received from Punjab Pollution Control Board laboratory, are mentioned as per **Table-5** given below.

Table-5: Analysis results of effluent samples

S.no.	Point of sample collection	From the Katcha Channel leading from sewer of HPSIDC
1.	pH	6.57
2.	TDS, mg/l	380
3.	COD, mg/l	548
4.	BOD, mg/l	160
5.	TSS, mg/l	114
6.	Iron, mg/l	1.25
7.	Zinc, mg/l	BDL
8.	Total Chrome, mg/l	BDL
9.	Total Coliform, MPN/100 ml	1,70000
10.	Fecal Coliform, MPN/100 ml	94000

These analysis results are annexed as per **Annexure-6.**

8.2.1 Discussion on the analysis results and observations

The analysis results indicate that the values of pH, TDS, COD, BOD, TSS, Iron, Zinc, Total Chrome, Total Coliform and Fecal Coliform were observed to be 6.57, 380 mg/l, 548 mg/l, 160 mg/l, 114 mg/l, 1.25 mg/l, BDL, BDL, 1,7000 MPN/100 ml and 94000 MPN/100ml, respectively.

The values of these parameters further indicate that through sewerage system of, HPSIDC, sewage of Sansarpur Terrace industrial area is being discharged into swan

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drain and thus contaminating its water quality and subsequently affecting the aquatic life of river Beas.

8.2.2 Recommendations of the Monitoring Committee

The monitoring committee recommends that Chairman Himachal Pradesh Pollution Control Board shall initiate action as under.

i. To take legal action against the responsible officers of HPSIDC under the provisions of the Water Act, 1974 for discharging untreated wastewater of Sansarpur Terrace industrial area into river Swan.

ii. To impose an environment compensation amounting to Rs. 25 Lakh on department of HPSIDC for not providing adequate treatment facility to treat the domestic wastewater before its discharge.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

8.3 Visit to M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area, Phase 3, District Kangra, Himachal Pradesh

The Monitoring Committee alongwith officers of PPCB and HPPCB visited M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area, Phase 3, District Kangra, Himachal Pradesh on 21.11.2019 to check the status of treatment system and the outlet through which the wastewater is discharged into river Swan. After thorough inspection, the location of the pipeline was traced out by the visiting officers and the industry was asked to bring the JCB to dig out the pipeline through which the wastewater was discharged into river Swan. Initially, the industry dilly-delayed the matter on the one or the other pretext. However, the officers of the Punjab Pollution Control Board kept on pursuing the industry to bring the JCB for carrying out excavation to trace out the pipeline and to dismantle the same.

Thereafter, the industry brought the JCB and excavation was started and lastly after carrying out 7-8 feet deep excavation, an RCC pipeline of about 8 inch diameter was traced out, through which the wastewater was being discharged by the industry into river Swan. One length of pipeline of about 6' was dismantled and the opening in the

wall was got plugged with cement concrete. The photographs showing the dismantled pipeline and plugging the opening in wall are mentioned as per **Plate 6 and Plate 7**.

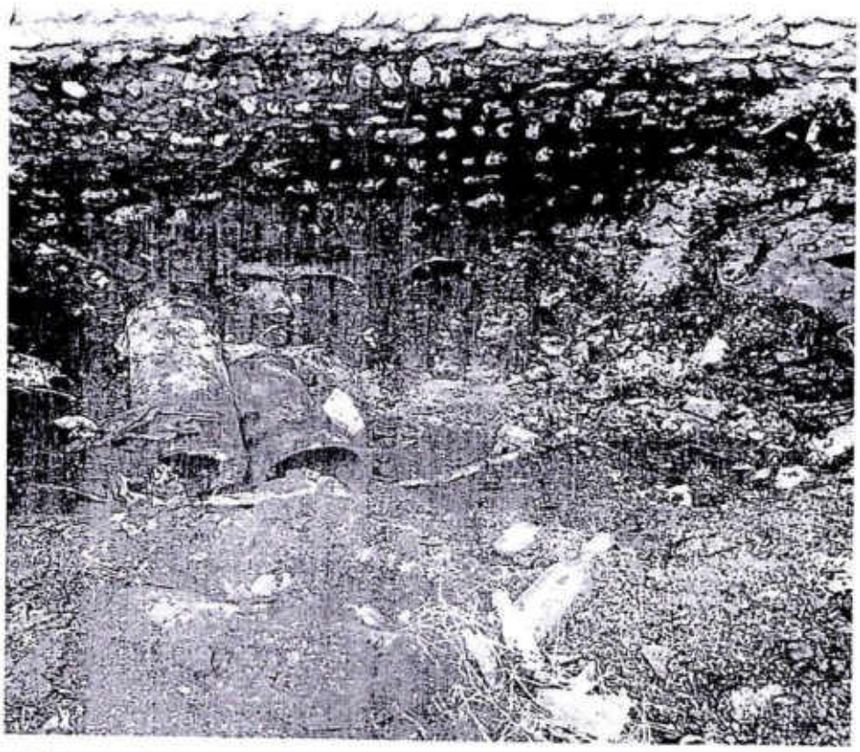

Plate 6: Pipeline through which the wastewater was being discharged into river Suran, which was got dismantled with JCB

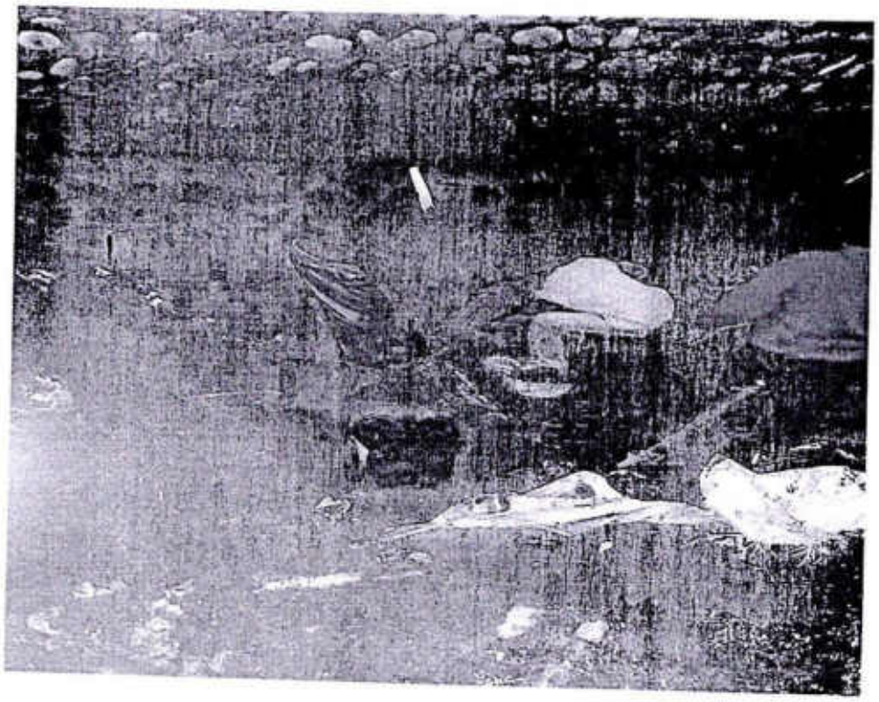

Plate 7: Plugging of outlet in the boundary wall of the industry

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8.3.1 Visit to ETP of industry

The industry namely M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area ,Phase 3, District Kangra, Himachal Pradesh was visited on 21.11.2019 and observed as under:

a. It is a grain based distillery and as informed by representative of the industry, this distillery is engaged in the business of manufacturing 45 KLD of ENA and absolute alcohol (ethanol) by using broken rice/maize as raw material.

b. The industry generates wastewater from following sections:

- Ferment Washing
- Floor Washing
- Spent Wash
- Spent Lees
- Gland Leakages
- DM Plant regeneration
- RO reject of RO installed for water treatment and RO installed for treated wastewater
- Cooling Tower blow down
- CIP of MEE
- CIP of decanter
- CIP of RO (with HCl, antiscalant and SMBS)
- Bottle Washing

c. The industry has installed an ETP consisting of equalization tank, anaerobic digester, aeration tank, secondary clarifier, congulation with alum & organic coagulant, flocculation with polyelectrolyte, tube settler, Hypo dosing, dual/media filter, ultra filtration and RO plant. The aeration tank of the ETP was in operation.

d. The weir of secondary clarifier was only 5 to 10% effective due to its uneven surface. Therefore, this component was not being operated properly and effectively. Photograph showing uneven and ineffective surface of where of secondary clarifier is mentioned as per **Plate-8.**

Plate 8: Photograph showing uneven and Ineffective surface of weir of secondary clarifier

e. RO plant was not in operation.

f. The representative of the industry informed that the capacity of ETP is 215 KLD, in which the effluent about 125 KLD is treated and in this ETP only spent lees to the tune of 120-125 KLD is being treated. This fact was also corroborated from the physical appearance of the wastewater lying stored in the collection tank of the ETP. He was asked to intimate the treatment and disposal of other streams as mentioned in para b above except spent wash, but he did not properly reply in this regard. It indicates that the wastewater of rest of the streams except spent wash was being discharged into river Swan through the pipeline got the dismantled by the team.

g. As per CPCB norms, the quantity of spent wash generation from grain based distillery varies from 7-9 times of the alcohol produced and the wastewater generation of other streams also varies from 5 to 7 times of the alcohol produced. Therefore, the generation of spent wash and other streams of this unit may vary in the range of 315-405KLD and 225-315KLD. Thus, the capacity of the ETP installed by the industry does not seem to be in order.

h. The industry has installed MEE followed by drier to handle the spent wash and to produce DDGS. The representative of the industry was also asked to explain as to how the spent wash in managed when any fault occurs in the MEE or the drier, but he could not explain technically in this regard. This showed that the industry might be discharging even its spent wash into river Swan when any fault occurred in the MEE or the drier.

8.3.2 Other observations

i. The industry namely M/s Premier Alkobev Pvt. Ltd., Plot no.1, Sansarpur Terrace, Industrial Area, Phase 3, District Kangra, Himachal Pradesh disposes off the fuel ash along the bank of river Swan, which is not the scientific mode of disposal of fuel ash. Rather, its disposal along the bank of the river deteriorates the quality of water of river Swan. Photograph showing the heap of fuel ash alongwith bank of river Swan in mentioned as per **Plate 9**

Plate 9: Photograph showing the disposal of fuel ash along the bank of river Swan

ii. The industry did not produce any record of operation of ETP despite the requests made by the visiting officers.

iii. Very poor housekeeping was noticed in the premises of the industry.

iv. The values of COD, BOD and TSS in the effluent samples collected from outlet of the industry as mentioned in point 3, page 13 of this report, are higher than the permissible limits of COD:250mg/l, BOD:30mg/l and TSS:100 mg/l.

8.3.2.1 Recommendations

In view of the analysis results of the effluent samples collected on 20.11.2019, maintaining outlet to discharge the untreated streams into Swan river, misleading the Monitoring Committee by way of not detecting the underground pipeline laid to discharge its untreated effluent into rive Swan and subsequently in river Sutlej and affecting the quality of environment, the Monitoring Committee recommends as under:

Chairman HPPCB, shall initiate action to issue directions under the provisions of the Water Act, 1974 as under:

i. To impose the environment compensation amounting to Rs. 50 Lakh upon the industry. The said amount may be utilized for rejuvenation of the quality of the environment.

ii. To issue direction under the provisions of the Water Act, 1974 for its closure.

iii. The consent granted to the industry under the provisions of the Water Act, 1974 may be revoked.

iv. The industry shall upgrade its effluent treatment plant to treat all the waste streams within 3 months.

v. The industry shall discharge its treated effluent onto land for plantation and its shall not discharge any effluent into river Swan.

vi. The industry shall dispose off its rice husk ash in an environmentally sound manner and its shall not dispose off the same along the bank of river Swan.

vii. The industry shall improve housekeeping within its premises.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

8.4 M/s Jassal Paper Mill, industrial area, Sansarpur Terrace, District kangra (HP)

The local residents met the monitoring committee on 21.11.2019 and informed that the M/s Jassal Paper Mill, industrial area, Sansarpur Terrace, District kangra (HP) discharges its wastewater into natural drain flowing adjacent to the industry and the said drain leads to river Swan.

8.4.1 Visit to the industry

The Monitoring Committee visited the industry on 21.11.2019 in the presence of officers of Punjab Pollution Control Board and HPPCB and it was observed that the industry was not in operation. However, the committee observed that there was a big heap of rice husk ash on one side of the industry towards the natural drain. The heap of the rice husk ash in loose form was a big source of nuisance and may flow into the natural drainage system. The photograph showing the heap of the rice husk ash is mentioned as per **Plate-10.**

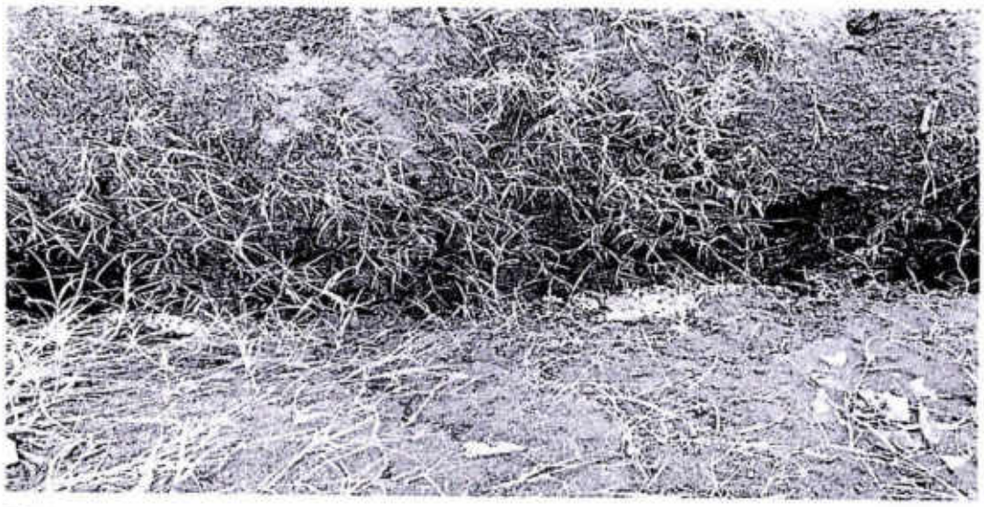

Plate-10: Photograph showing the heap of the rice husk ash towards the natural drain

The Monitoring Committee directed that Chairman, Himachal Pradesh Pollution Control Board shall issue necessary directions under the provisions of the Air Act, 1981 to the industry as under:

1) To dispose off rice husk ash in an environmentally sound manner so that it may not cause any public nuisance and ash particles may not blow into the air.
2) To construct brick boundary wall of adequate height within 3 months towards the natural drain so that any rice husk ash or any effluent may not enter into the natural drain.
3) HPPCB shall submit the compliance report on the above said directions within 3½ months.

8.5 M/s Deepak battery storage, industrial area, Sansarpur Terrace, district Kangra

The local residents, who met the monitoring committee on 21.11.2019, have also made complaint that M/s Deepak battery storage, industrial area, Sansarpur Terrace, District Kangra also discharges its wastewater into natural drain adjoining to the industry. Accordingly, the monitoring committee directed Sh. S.S Matharu, Environment Engineer, Punjab Pollution Control Board to visit the industry and submit its report.

The industry was visited on its backside by Sh. S.S Matharu, Environmental Engineer, Punjab Pollution Control Board on 21.11.2019 and reported as under:

i. M/s Deepak Battery Storage, which is engaged in the business of manufacturing of lead acid batteries, was visited from its backside and wastewater was seen coming from its premises.

ii. The wastewater of the industry was being discharged into the natural drain through the katcha khala of agricultural fields

iii. The stagnation of wastewater was observed in the agricultural fields in a small stretch due to which the texture of the soil has been converted into sludge like properties. Photographs showing the discharge of wastewater through the katcha khala of agricultural fields, its stagnation in Katcha path and texture of soil of the fields are mentioned as per plates 11 to 13.

Plate 11: Photographs showing the discharge of wastewater through the katcha khala of agricultural fields.

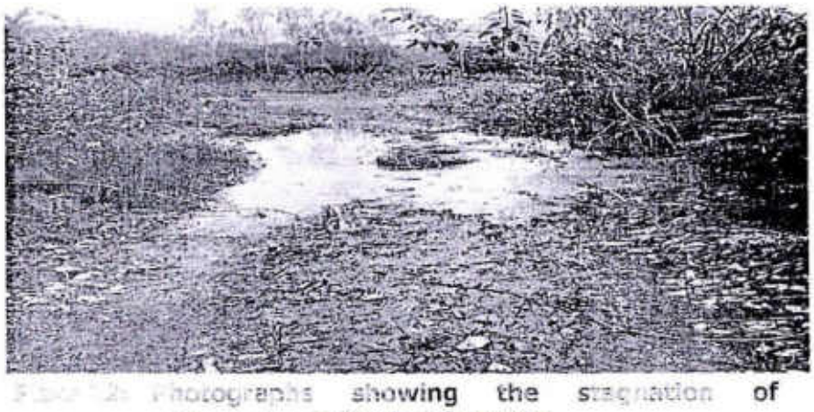

Plate 12: Photographs showing the stagnation of wastewater in the katcha rasta

Plate 13: Photographs showing the condition of texture of the soil became like sludge in the agricultural fields due to discharge of wastewater of industry.

8.5.1 Collection of effluent samples

The officers of PPCB, collected the effluent samples of the wastewater and yellowish color sludge deposited in the kutcha khala to ascertain their characteristics and these samples were sent to PPCB, Laboratory Patiala for analysis. The analysis results as received from Punjab Pollution Control Board are annexed as per **Annexure-7**. These analysis results are mentioned in **Table-7** given below.

Table-7: Analysis results of effluent samples

S.no.	Point of sample collection	From the katch channel existing on the backside of M/s Deepak battery storage, industrial area, Sansarpur Terrace, district Kangra.
1.	pH	4.2
2.	TDS, mg/l	950
3.	TSS, mg/l	40
4.	Iron, mg/l	127
5.	Lead, mg/l	BDL
6.	Total chrome, mg/l	0.37

8.5.2 Discussion on the analysis results, observations and recommendations

The analysis results indicate that the values of the parameters were observed as pH: 4.2, TDS: 950 mg/l, TSS: 40 mg/l, Iron: 127 mg/l, Lead: BDL, Total Chrome: 0.37 mg/l. The value of pH and Iron are beyond the permissible limits of 5.5 to 9.0 and 3 mg/l, respectively. Thus the industry is discharging acidic effluent with very high value of iron As 127 mg/l into kachha channel in the agriculture field and thus contaminating the soil of the agriculture field and degrading the environment.

Also, the analysis results of the soil sample collected from Katcha channel existing on the back side of industry on 21.11.2019 (**Annexure-8**) indicate the values of parameters Iron: 7781 mg/kg, T.Chrome: 3.926 mg/kg and Lead: 3.12 mg/kg were higher than the values of these parameters in normal soil as Iron: 142.2-313.5 mg/kg, T.Chrome: 4.123-6.774 mg/kg and Lead: 0.061-0.461 mg/kg (RUQIA NAZIR et al/J.Pharma. Sci. & Res. Vol. 7(3), 2015, 89-97).

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In view of the above, the monitoring committee recommends as under:

8.5.2.1 Recommendations

Chairman HPBCB shall initiate action to issue directions under the provisions of the Water Act, 1974 as under:

i. The Chairman HPPCB shall impose environment compensation amounting to Rs. 10 Lakh upon the industry, the said amount may be utilized for improvement in the quality of environment.

ii. To revoke consent to operate under the provisions of the Water Act, 1974, if granted to the industry

iii. To direct the industry to install effluent treatment plant or upgrade its existing ETP to ensure the achievement of standards prescribed by MOEF/HPPCB. The treated effluent may be discharged on to land for plantation and shall not be used for agriculture fields.

iv. To reduce the production capacity of the industry appropriately till the ETP is installed or upgraded.

With regard to recommendations made by the Executive Committee in the case of the industry, as mentioned above, it is clarified that PPCB may take action as per the provisions of the Water Act, 1974 and as per the directions of the Hon'ble National Green Tribunal in para no. 16 of order dated 16.7.2019 and para no. 22 of order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and para no. 21 of order dated 22.11.2019 in OA no. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River.

(Dr. Babu Ram) **(S.C. Aggarwal)** **(Sant Balbir Singh Seechewal)**

Justice Jasbir Singh
Former Judge,
Punjab & Haryana High Court,
Now as Chairman of the Monitoring Committee

189

Annexure –I

Name of Officers present during the visit of NGT Monitoring Committee at Dasuya, Distt- Hoshiarpur:

S.No.	Name & Designation	Department
1.	Sh. Ashish Rai, XEN	Punjab Water Supply & Sewerage Board
2.	Sh. Amandeep, SDO	Punjab Water Supply & Sewerage Board
3.	Sh. Madan Singh, Executive Officer	M.C. Dasuya
4.	Er. Harbir Singh,SEE	Punjab Pollution Control board.
5.	Er. S.S.Matharu, EE	Punjab Pollution Control board.
6.	Er, Kamaljit Singh, AEE	Punjab Pollution Control board.
7.	Miss Sandeep Kaur, JSO	Punjab Pollution Control board.

Name of Officers present during the visit of NGT Monitoring Committee at Talwara, Distt- Hoshiarpur:

S.No.	Name & Designation	Department
1.	Ms. Monika Sharma, President	Nagar Panchayat, Talwara
2.	Sh. Joginder Pal, Vice President	Nagar Panchayat, Talwara
3.	Sh. Raj Kumar Rathod, Chief Engineer	Beas Dam, BBMB, Talwara
4.	Sh. R.D. Sawa, SE, Talwara Circle	BBMB, Talwara
5.	Sh. Satnam Singh, Addl. SE,	Township Division, BBMB, Talwara
6.	Sh. Gopal, SDO	Water Supply, BBMB, Talwara
7.	Sh. Manik Mahajan, SDO, LD-1	BBMB, Talwara
8.	Sh. Bhupinder Singh, JE	Nagar Panchayat, Talwara
9.	Sh. Surinder Singh, General Inspector	Nagar Panchayat, Talwara
10	Er. Harbir Singh,SEE	Punjab Pollution Control board.
11	Er. S.S.Matharu, EE	Punjab Pollution Control board.
12	Er, Kamaljit Singh, AEE	Punjab Pollution Control board.
13	Miss Sandeep Kaur, JSO	Punjab Pollution Control board.

Name of Officers present during the visit of NGT Monitoring Committee at Pathankot .

S.No.	Name & Designation	Department
1.	Sh. Amandeep Singh , SDM	Pathankot
2.	Sh. S.K. Ranga, XEN	Punjab Water Supply & Sewerage Board
3.	Sh. Britesh Virdi, SDO	Punjab Water Supply & Sewerage Board
4.	Er. Harbir Singh,SEE	Punjab Pollution Control board.
5.	Er. Shiv Kumar, EE	Punjab Pollution Control board.
6.	Er.Rozert Dhamija, AEE	Punjab Pollution Control board.
7.	Er.Sukhdev Singh, AEE	Punjab Pollution Control board.
8.	Er.Rajesh Bawa, AEE	Punjab Pollution Control board.
9.	Miss Sandeep Kaur, JSO	Punjab Pollution Control board.

Annexure - 2

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਪ੍ਰਯੋਗਸਾਲਾ, ਫੋਕਲ ਪੁਆਇੰਟ, ਪੀ:ਐਸ:ਆਈ:ਈ:ਸੀ ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ
ਫੋਨ ਨੰਬਰ : 0181-2600301 www.ppcb.gov.in ਈ-ਮੇਲ : zolabjalandhar@gmail.com

ਨੰਬਰ..... ਮਿਤੀ .....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 636-637 /2019
2.	Name of industry	M/s STP Dasuya, Distt. Hoshiarpur.
3.	Name of Sample Collecting Officer	Er. Kamaljit Singh (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	20/11/2019
6.	Date of Sample Receipt in Lab	21/11/2019
7.	Point of sample collection	As per data sheet

RESULTS

No	PARAMETERS	Inlet	Outlet
1.	pH	7.3	7.4
2.	BOD (mg/l)	65	25
3.	TSS (mg/l)	168	38

Note:- Sample of F.coli has sent to Head Office, Lab Patiala by Regional Office as conveyed by concerned AEE. Hoshiarpur

Sample Analyzed by:-

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 3064-65 Dated: 29/11/19

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal office, Jalandhar.
2. The Environmental Engineer, Regional Office, Hoshiarpur along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Asstt Scientific Officer
Zonal Lab, Jalandhar

E-2019

Annexure-2
E-2

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1.	Laboratory Sample No	E-1515-1516/H.O.Lab Monitoring 2019
2.	Name of Industry	M/s STP Dasuya, Distt. Hoshiarpur
3.	Name of Sample collecting Officer	EE, RO, Hoshiarpur/NGT Committee
4.	Designation of the officer authorizing Test	EE, RO, Hoshiarpur
5.	Type of Sample	Grab
6.	Date & Time of Sample collection	20.11.2019
7.	Date & Time of Sample receipt in Lab.	21.11.2019
8.	Period of Analysis	21.11.2019 to 02.12.2019
9.	Test Methods	As per relevant parts of IS:1622/Methods of APHA

Results

Sr. No.	Parameters	Inlet of STP	Outlet of STP
1.	Fecal Coliform MPN/100ml	26000	930

* Not Covered under scope of NABL

---End of Report---

Analyzed by 5/12/19

Scientific Officer 5/12/19

Endst. No. 87032-33 Dt. 9/12/2019

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar.
2. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Hoshiarpur.

Asstt. Scientific Officer
5/12/19

Annexum-3

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਪ੍ਰਯੋਗਸਾਲਾ, ਫੋਕਲ ਪੁਆਇੰਟ, ਪੀ:ਐਸ:ਆਈ:ਈ:ਸੀ ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ
ਫੋਨ ਨੰਬਰ : 0181-2600301 www.ppcb.gov.in ਈ-ਮੇਲ : zolabjalandhar@gmail.com

ਨੰਬਰ..... ਮਿਤੀ .....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 633-34-35 /2019
2.	Name of industry	M/s STP BBMB Talwara, Distt. Hoshiarpur.
3.	Name of Sample Collecting Officer	Er. Kamaljit Singh (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	20/11/2019
6.	Date of Sample Receipt in Lab	21/11/2019
7.	Point of sample collection	As per data sheet

RESULTS

S. No	PARAMETERS	Inlet	Outlet	Aeration Tank
1.	pH	6.7	7.2	-
2.	BOD (mg/l)	50	16	-
3.	TSS (mg/l)	42	20	-
4.	MLSS (mg/l)	-	-	910

Note:- Sample of F. coli has sent to Head Office, Lab Patiala by Regional Office as convoyed by concerned AEE. Hoshiarpur

28/11/19

Sample Analyzed by: -

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 362-63 Dated: 29/11/19

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal office, Jalandhar.
2. The Environmental Engineer, Regional Office, Hoshiarpur along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

29/11

Asstt Scientific Officer
Zonal Lab, Jalandhar

Annexure – 3

E 2019

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1.	Laboratory Sample No.	E- 1517-1518/H.O.Lab. Monitoring/2019
2.	Name of Industry	M/s STP, BBMB, Talwara, Distt Hoshiarpur
3.	Name of Sample collecting Officer	EE, RO, Hoshiarpur NGT Committee
4.	Designation of the officer authorizing Test	EE, RO, Hoshiarpur
5.	Type of Sample	Grab
6.	Date &Time of Sample collection	20.11.2019
7.	Date &Time of Sample receipt in Lab.	21.11.2019
8.	Period of Analysis	21.11.2019 to 02.12.2019
9.	Test Methods	As per relevant parts of IS:1622 Methods of APHA

Results

Sr. No.	Parameters	Inlet of STP	Outlet of STP
1.	Fecal Coliform MPN/100ml	17000	820

* Not covered under scope of NABL

---End of Report---

Analyzed by

o/c

Scientific Officer

Endst. No: 5120-31 Dt. 9/12/2019

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar.
2. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Hoshiarpur.

Asstt. Scientific Officer

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Annexure-4 E-2019

TC-7045

POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No. — E-1519-25/-H.O.Lab. Monitoring/2019
2. ULR Number — ULR-TC704518000000001623
3. Name of Industry — M/s Pioneer Industries Guletin Division , Industrial Growth Center Distt Pathankot.
4. Name of Sample collecting Officer — Er. Harbir Singh, SEE, Er. Robert Dhamija AEE along with NGT monitoring Committee
5. Designation of authorizing Test — EE, RO, Batala
6. Type of Sample — Grab
7. Date &Time of Sample collection — 20.11.2019
8. Date &Time of Sample receipt in Lab. — 21.11.2019
9. Period of Analysis — 21.11.2019 to 28.11.2019
10. Test Methods — As per relevant parts of IS:3025/IS:1622 & Methods of APHA

Results

Sr. No.	Parameters	Inlet	Aeration Tank-I	Aeration Tanl-2	Aeration Tank -3	UASB Digestor	Outlet of ETP	Plantation Area
1.	pH	3.4	-	-	-	6.85	7.9	7.21
2.	Total Suspended Solids mg/l	788	-	-	-	170	60	40
3.	Chemical Oxygen Demand mg/l	9848	-	-	-	390	152	104
4	Bio-chemical Oxygen Demand mg/l	4250	-	-	-	125	45	35
5	Total Dissolved Solids mg/l	850	-	-	-	2670	903	670
6	Oil and Grease mg/l	-	-	-	-	5.2	BDL	-
7	*Mixed Liquid Suspended Solids mg/l	-	1690	2420	2600	-	-	-
8	*Mixed Liquid Volatile Suspended Solids mg/l	-	1240	1680	2090	-	-	-

* Not Covered under scope of NABL

---End of Report---

Analyzed by 25/11/19

Scientific Officer
29/11/2019

Endst. No: 36404-07 Dt. 29/11/2019

A copy of the above is forwarded to the:-

1. The Chairman ,Office of NGT Monitoring Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali
2. The Member Secretary . Punjab Pollution Control Board Patiala
3. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office- Amritsar.
4. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Batala

Asstt. Scientific Officer
29/11/2019

27/
20/11/19

Gmail

Regarding Data Sheets of M/s STP, Pathankot and M/s Pioneer Industries, Pathankot.

ppcb batala <ppcbbatala@gmail.com> Tue, Nov 26, 2019 at 2:14 PM
To: "Sr. Scientific Officer" <solab2010@gmail.com>

[Quoted text hidden]
[Quoted text hidden]

New Doc 2019-11-25 15.10.00.pdf
1517K

Sr. Scientific Officer <solab2010@gmail.com>

PUNJAB POLLUTION CONTROL BOARD
Regional Office, Batala.

DETAILS TO BE SUPPLIED FOR THE COLLECTION OF SAMPLE

PART-A

1. Name & address of the industry: M/s Pioneer Industries (Gluten Division) Inds. Growth Centre, Pathankot
2. Raw material used: Wheat Flour
3. i) Product: Gluten, Starch, MDP, Liquid Glucose etc
   ii) Processes involved: Various
4. i) Give the name of the processes in operation at the time of sampling: Dough Making → Maturation → Seperation → washing etc.
   ii) The number of wastewater streams from different processes alongwith discharge of each: All in operation
   Various leading to one
5. i) Quantity of industrial effluent discharge per hour (in litres): 11 m³/hr
   ii) Is the discharge of industrial effluent continuous or intermittent and if intermittent, day & time of its discharge: Continuous
   iii) Is the quantity and quality of industrial effluent from different streams uniform through out or not: Almost Uniform
   iv) Present method of disposal of industrial effluent: onto land for Plantation
6. i) Working hours: 24 hours.
   ii) Closed day: As per requirement
7. Number of outlets through which industrial effluent is discharged/ carried outside the industry: one
8. Name of the occupant, Representative of the industry with designation present at the time of sampling: Sh. Nootan Sharma, Plant Incharge
9. Process not working at the time of sampling & why: All in operation
10. Parameters to be analysed
11. Sample preserved for(tick)
    i) Organic parameter [freezer below 4°C]
    ii) Metals(pH less than 2 with HNO3)
    iii) Cyanide(pH above 10 with NaoH)
    iv) Oil & grease(separate 1 lt sample Glass bottles & freeze)
12. Detailed visual report of Water & Air.

Inlet	I_1	pH, BOD, COD		
	I_2	TDS, TSS		
Aeration	A_1	MLSS, MLVSS	O_1	O&G
Aeration	A_2	MLSS, MLVSS	with O_2	pH, BOD
			O_2	COD, TDS, TSS
Aeration	A_3	MLSS, MLVSS		
UASB Digester	$UASB_1$	O&G	Pond P_1	pH, BOD,
	$UASB_2$	pH, BOD, TDS, COD, TSS	P_2	COD, TDS, TSS

Annexure - 5

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਪ੍ਰਯੋਗਸ਼ਾਲਾ, ਫੋਕਲ ਪੁਆਇੰਟ, ਪੀ:ਐਸ:ਆਈ:ਈ:ਸੀ ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ

ਫੋਨ ਨੰਬਰ : 0181-2600301 www.ppcb.gov.in ਈ-ਮੇਲ : zolabjalandhar@gmail.com

ਨੰਬਰ.....

ਮਿਤੀ.....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 767 /2019
2.	Name of industry	The Waste Water sample collected from Swan River Near Sansarpur, Talwara.
3.	Name of Sample Collecting Officer	Er. S.S Matharoo (EE) Er. Kamaljit Singh (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	20.11.2019
6.	Date of Sample Receipt in Lab	21.11.2019
7.	Point of sample collection	As per data sheet

RESULTS

S. No	PARAMETERS	RESULTS
1.	pH	5.6
2.	COD (mg/l)	4200
3.	BOD (mg/l)	1630
4.	TSS (mg/l)	472
5.	TDS (mg/l)	789

Sample Analyzed By: 28/11/19

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 305-51

Dated: 28/11/19

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal office, Jalandhar.
2. The Environmental Engineer, Regional Office, Hoshiarpur along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Asstt Scientific Officer-II
Zonal Lab, Jalandhar

ANNEXURE-6

SW 2017

POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No.	SW 1407/ H.O.Lab. Monitoring/2019
2. Name of Industry	Waste Water Sample Collected by the Hon'ble NGT Monitoring Committee
3. Name of Sample collecting Officer	Er. S.S.Matharu, Environmental Engineer
4. Designation of Officer authorizing Test	Environmental Engineer, Regional Office, Hoshiarpur
5. Type of Sample	----
6. Date &Time of Sample collection	21.11.2019
7. Date &Time of Sample receipt in Lab.	21.11.2019
8. Period of Analysis	21.11.2019 to 05.12.2019
9. Test Methods	As per relevant parts of IS:1622/Methods of APHA

Results

Sr. No.	Point of sample collection	From the Katcha Channel leading from sewer of HPSIDC
1.	pH	6.57
2	Total Dissolved Solids mg/l	380
3	Chemical Oxygen Demand mg/l	548
4	Bio-Chemical Oxygen Demand mg/l	160
5	Total Suspended Solids mg/l	114
6	Iron mg/l	1.25
7	Zinc mg/l	BDL
8	*Total Chrome mg/l	BDL
9	Total Coliform MPN/100ml	170000
10	Fecal Coliform MPN/100ml	94000

---End of Report---

Scientific Officer 6/12/19

Analyzed by 6/12/19

Endst. No: 37012-15 Dt. 9/12/2019

A copy of the above is forwarded to the:-

1. The Chairman ,Office of NGT Monitoring Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali
2. The Member Secretary . Punjab Pollution Control Board Patiala
3. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office- Jalandhar.
4. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Hoshiarpur

Asstt. Scientific Officer 6/12/19

DATA SHEET

1) Sample of Wastewater was collected as directed by the Monitoring Committee constituted by the Hon'ble NGT.
2) Point of Sample Collection: From the Katcha Channel leading from sewer of HPSIDC to active stream of Swan river.
3) Date of Sample Collection: 21.11.2019 at 01:40 pm
4) Colour of the Sample: Grayish
5) Odour of the Sample: Foul Smell
6) Parameters to be analyzed:

Sample code	Parameters
T1	pH, BOD, TDS, TSS
T2	COD
T3	Fe, Zn, T.cr
T4	T-coli, F-coli

SW 1407

7) Name of the officers present during sampling:
   a. On behalf of Monitoring Committee
      i. Hon'ble Justice Jasbir Singh (Retd.) – Chairman Monitoring Committee
      ii. Sh. S.K. Aggarwal, I.A.S (Retd.) – Member
      iii. Dr. Babu Ram – Member
   b. On behalf of PPCB
      i. Er. Harbir Singh, SEE
      ii. Er. S.S. Matharu, EE
      iii. Sh. Paramjeet Singh, SA
   c. On behalf of HPCB
      i. Er. Varun Gupta, AEE

22.11.19

ANNEXURE-7

SW 2017

POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

1. Laboratory Sample No.	SW 1408/ H.O.Lab. Monitoring/2019
2. Name of Industry	Waste Water Sample Collected by the Hon'ble NGT Monitoring Committee
3. Name of Sample collecting Officer	Er. S.S.Matharu, Environmental Engineer
4. Designation of Officer authorizing Test	Environmental Engineer, Regional Office, Hoshiarpur
5. Type of Sample	----
6. Date &Time of Sample collection	21.11.2019
7. Date &Time of Sample receipt in Lab.	21.11.2019
8. Period of Analysis	22.11.2019 to 05.12.2019
9. Test Methods	As per relevant parts of IS:1622/Methods of APHA

Results

Sr. No.	Point of sample collection	From the Katcha Channel existing on the backside of M/s Deepak Battery Storage, Sansarpur Terrace, Distt Kangra, Himachal Pardesh
1.	pH	4.2
2	Total Dissolved Solids mg/l	950
3	Total Suspended Solids mg/l	40
4	Iron mg/l	127
5	Lead mg/l	BDL
6	*Total Chrome mg/l	0.37

---End of Report---

5/12/19
Scientific Officer

Analyzed by
6/12/19

Endst. No: 3697 8-81 Dt. 6/12/2019

A copy of the above is forwarded to the:-

1. The Chairman .Office of NGT Monitoring Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali
2. The Member Secretary . Punjab Pollution Control Board Patiala
3. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office- Jalandhar.
4. The Environmental Engineer, Punjab Pollution Control Board, Regional Office, Hoshiarpur

Asstt. Scientific Officer
6/12/19

DATA SHEET

1) Sample of Wastewater and Soil / Sludge samples were collected as directed by the Monitoring Committee constituted by the Hon'ble NGT.
2) Point of Sample Collection: From the Katcha Channel existing on the backside of M/s Deepak Battery Storage, Sansarpur Terrace, District Kangra, Himachal Pardesh, which was leading to natural channel.
3) Date of Sample Collection: 21.11.2019 at 04:10 pm
4) Colour of the Sample: Orange/Light Red
5) Odour of the Sample: Stinky Smell
6) Parameters to be analyzed:

   (a) Wastewater

Sample code	Parameters
A1	pH, TDS, TSS
A2	Fe, Pb, T.cr
A3	pH, Fe, Pb

SW 1408

   (b) Soil/Sludge Sample deposited in the channel from where wastewater sample was collected. This sample is to be analyzed for: 93
   pH, Iron, Lead, Total Chromium, Moisture Contents, Colour, Odour

7) Name of the officers present during sampling:
   a. On behalf of Monitoring Committee
      i. Hon'ble Justice Jasbir Singh (Retd.) – Chairman Monitoring Committee
      ii. Sh. S.K. Aggarwal, I.A.S (Retd.) – Member
      iii. Dr. Babu Ram – Member
   b. On behalf of PPCB
      i. Er. Harbir Singh, SEE
      ii. Er. S.S. Matharu, EE
      iii. Sh. Paramjeet Singh, SA
   c. On behalf of HPCB
      i. Er. Varun Gupta, AEE

Annexure-8

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
SOIL ANALYSIS REPORT

1. Laboratory Sample No.	93/ H.O.Lab. Monitoring/2019
2. Name of Industry	From the katcha channel existing on backside of M/s Deepak Battery Storage ,Sansarpur terrace, District Kangra, H.P
3. Name of Sample collecting Officer	Er. S.S. Matharu (EE) in presence of Monitoring committee constituted by Hon'ble NGT
4. Designation of officer authorizing Test	-
5. Type of Sample	-
6. Date &Time of Sample collection	21.11.19
7. Date &Time of Sample receipt in Lab.	21.11.19
8. Period of Analysis	21.11.19 to 05.12.19
9.Test Methods	As per relevant parts of IS:3025/Method of APHA

Results

Sr. No.	Parameters	From the katcha channel existing on backside of M/s Deepak Battery Storage ,Sansarpur terrace, District Kangra,
1	pH	4.2
2	Iron mg/kg	7781
3	Total Chrome mg/kg	3.926
4	Lead mg/kg	3.12
5	Colour	Blackish
6	Odour	Odorless
7	Moisture Content %	87

Note: 5 gm of soil sample dissolved in 100 ml of de-ionized water

---End of Report---

6/12/19
Analyzed by

06/12/19
Scientific Officer

Endst. No: 37034 Dt. 9/12/2019

A copy of the above is forwarded to Dr. Babu Ram, Member, Executive Committee, Office of Executive Committee, Tower no. 5, 4th Floor, Forest Complex, Sector -68, SAS Nagar for information and further necessary action please.

6/12/19
Jr. Scientific Officer

DATA SHEET

1) Sample of Wastewater and Soil / Sludge samples were collected as directed by the Monitoring Committee constituted by the Hon'ble NGT.
2) Point of Sample Collection: From the Katcha Channel existing on the backside of M/s Deepak Battery Storage, Sansarpur Terrace, District Kangra, Himachal Pardesh, which was leading to natural channel.
3) Date of Sample Collection: 21.11.2019 at 04:10 pm
4) Colour of the Sample: Orange/Light Red
5) Odour of the Sample: Stinky Smell
6) Parameters to be analyzed:

(a) Wastewater

Sample code	Parameters
A1	pH, TDS, TSS
A2	Fe, Pb, T.cr
A3	pH, Fe, Pb

(b) Soil/Sludge Sample deposited in the channel from where wastewater sample was collected. This sample is to be analyzed for:

pH, Iron, Lead, Total Chromium, Moisture Contents, Colour, Odour

7) Name of the officers present during sampling:
   a. On behalf of Monitoring Committee
      i. Hon'ble Justice Jasbir Singh (Retd.) – Chairman Monitoring Committee
      ii. Sh. S.K. Aggarwal, I.A.S (Retd.) – Member
      iii. Dr. Babu Ram – Member
   b. On behalf of PPCB
      i. Er. Harbir Singh, SEE
      ii. Er. S.S. Matharu, EE
      iii. Sh. Paramjeet Singh, SA
   c. On behalf of HPCB
      i. Er. Varun Gupta, AEE

Annexure-8

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
SOIL ANALYSIS REPORT

1. Laboratory Sample No.	93/ H.O.Lab. Monitoring/2019
2. Name of Industry	From the katcha channel existing on backside of M/s Deepak Battery Storage ,Sansarpur terrace, District Kangra, H.P
3. Name of Sample collecting Officer	Er. S.S. Matharu (EE) in presence of Monitoring committee constituted by Hon'ble NGT
4. Designation of officer authorizing Test	-
5. Type of Sample	-
6. Date &Time of Sample collection	21.11.19
7. Date &Time of Sample receipt in Lab.	21.11.19
8. Period of Analysis	21.11.19 to 05.12.19
9.Test Methods	As per relevant parts of IS:3025/Method of APHA

Results

Sr. No.	Parameters	From the katcha channel existing on backside of M/s Deepak Battery Storage ,Sansarpur terrace, District Kangra,
1	pH	4.2
2	Iron mg/kg	7781
3	Total Chrome mg/kg	3.926
4	Lead mg/kg	3.12
5	Colour	Blackish
6	Odour	Odorless
7	Moisture Content %	87

Note: 5 gm of soil sample dissolved in 100 ml of de-ionized water

---End of Report---

6/12/19
Analyzed by

06/12/19
Scientific Officer

Endst. No: 37034 Dt. 9/12/2019

A copy of the above is forwarded to Dr. Babu Ram, Member, Executive Committee, Office of Executive Committee, Tower no. 5, 4th Floor, Forest Complex, Sector -68, SAS Nagar for information and further necessary action please.

6/12/19
Jr. Scientific Officer

(93)

DATA SHEET

1) Sample of Wastewater and Soil / Sludge samples were collected as directed by the Monitoring Committee constituted by the Hon'ble NGT.
2) Point of Sample Collection: From the Katcha Channel existing on the backside of M/s Deepak Battery Storage, Sansarpur Terrace, District Kangra, Himachal Pardesh, which was leading to natural channel.
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(a) Wastewater

Sample code	Parameters
A1	pH, TDS, TSS
A2	Fe, Pb, T.cr
A3	pH, Fe, Pb

(b) Soil/Sludge Sample deposited in the channel from where wastewater sample was collected. This sample is to be analyzed for:

pH, Iron, Lead, Total Chromium, Moisture Contents, Colour, Odour

7) Name of the officers present during sampling:
   a. On behalf of Monitoring Committee
      i. Hon'ble Justice Jasbir Singh (Retd.) – Chairman Monitoring Committee
      ii. Sh. S.K. Aggarwal, I.A.S (Retd.) – Member
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      i. Er. Harbir Singh, SEE
      ii. Er. S.S. Matharu, EE
      iii. Sh. Paramjeet Singh, SA
   c. On behalf of HPCB
      i. Er. Varun Gupta, AEE

Annexure-8

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
SOIL ANALYSIS REPORT

1. Laboratory Sample No.	93/ H.O.Lab. Monitoring/2019
2. Name of Industry	From the katcha channel existing on backside of M/s Deepak Battery Storage ,Sansarpur terrace, District Kangra, H.P
3. Name of Sample collecting Officer	Er. S.S. Matharu (EE) in presence of Monitoring committee constituted by Hon'ble NGT
4. Designation of officer authorizing Test	-
5. Type of Sample	-
6. Date &Time of Sample collection	21.11.19
7. Date &Time of Sample receipt in Lab.	21.11.19
8. Period of Analysis	21.11.19 to 05.12.19
9.Test Methods	As per relevant parts of IS:3025/Method of APHA

Results

Sr. No.	Parameters	From the katcha channel existing on backside of M/s Deepak Battery Storage ,Sansarpur terrace, District Kangra,
1	pH	4.2
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4	Lead mg/kg	3.12
5	Colour	Blackish
6	Odour	Odorless
7	Moisture Content %	87

Note: 5 gm of soil sample dissolved in 100 ml of de-ionized water

---End of Report---

6/12/19
Analyzed by

06/12/19
Scientific Officer

Endst. No: 37034

Dt. 9/12/2019

A copy of the above is forwarded to Dr. Babu Ram, Member, Executive Committee, Office of Executive Committee, Tower no. 5, 4th Floor, Forest Complex, Sector -68, SAS Nagar for information and further necessary action please.

6/12/19
Jr. Scientific Officer

DATA SHEET

1) Sample of Wastewater and Soil / Sludge samples were collected as directed by the Monitoring Committee constituted by the Hon'ble NGT.
2) Point of Sample Collection: From the Katcha Channel existing on the backside of M/s Deepak Battery Storage, Sansarpur Terrace, District Kangra, Himachal Pardesh, which was leading to natural channel.
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pH, Iron, Lead, Total Chromium, Moisture Contents, Colour, Odour

7) Name of the officers present during sampling:
   a. On behalf of Monitoring Committee
      i. Hon'ble Justice Jasbir Singh (Retd.) – Chairman Monitoring Committee
      ii. Sh. S.K. Aggarwal, I.A.S (Retd.) – Member
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      i. Er. Harbir Singh, SEE
      ii. Er. S.S. Matharu, EE
      iii. Sh. Paramjeet Singh, SA
   c. On behalf of HPCB
      i. Er. Varun Gupta, AEE

Annexure-6

OFFICE OF THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no. 138 and 139 of 2016, O.A. 916 of 2018 (earlier O.A. no. 101 of 2014) O.A. no. 606 of 2018

(Official address: Tower no. 5, 4th Floor, Forest Complex, Sector-68, SAS Nagar) Tel no. 0172-2298091

No. CMC/2020/288
Dated: 6-1-2020

To

The Chairman,
Punjab Pollution Control Board,
Patiala.

Subject: **Visit to the Municipal Solid Waste Management Sites and other pollution sources in Jalandhar area by the Monitoring Committee constituted by the Hon'ble NGT in O.A. no. 606/2018 in the matter of compliance of Solid Waste Management Rules, 2016 and O.A. no. 916 of 2018 in the matter of Sobha Singh V/s State of Punjab and others on 3/12/2019.**

Please find enclosed herewith a report on visit to the Municipal Solid Waste Management Sites and other pollution sources in Jalandhar area by the Monitoring Committee constituted by the Hon'ble NGT in O.A. no. 606/2018 in the matter of compliance of Solid Waste Management Rules, 2016 and O.A. no. 916 of 2018 in the matter of Sobha Singh V/s State of Punjab and others on 3/12/2019 for your kind information and necessary action.

It is requested that necessary action on the recommendations made by the monitoring committee in the case of each industry & pollution source be taken and action taken report be submitted within 15 days.

DA/- As above.

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Endst no. CMC/2020/289 **Dated.** 6-1-2020

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, Deptt. of Science, Technology & Environment, Chandigarh for information and necessary action please.

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Visit to the Municipal Solid Waste Management sites and other pollution sources in Jalandhar area by the Monitoring Committee constituted by the Hon'ble NGT in OA no. 606/2018 in the matter of compliance of Solid Waste Management Rules, 2016 and OA No. 916 of 2018 in the matter of Sobha Singh Vs State of Punjab and Others on 03.12.2019.

The following were present during the visit:-

A. Members of the Monitoring Committee:

Sr.no.	Name and designation	Name and Designation in the Committee
1.	Justice Jasbir Singh, Former Judge, Punjab & Haryana High Court.	Chairman
2.	Sh. S.C Aggarwal IAS, Former Chief Secretary, Punjab	Senior Member
3.	Sh.Balbir Singh Seechewal	Member
4.	Dr. Babu Ram	Technical Expert

B. Officer of Punjab Pollution Control Board:

1.	Sh.Harbir Singh, Senior Environmental Engineer
2.	Sh. Arun Kumar Kakkar, Environmental Engineer
3.	Sh. Sandeep Kumar, Assistant Environmental Engineer
4.	Sh.GuneetSethi, Assist. Environmental Engineer
5.	Sh. Harpreet Singh, Junior Scientific Officer

C. Officers of Municipal Corporation, Jalandhar:

1.	Sh. D. Lakra, IAS, Commissioner
2.	Sh. Harcharan Singh, Junior commissioner
3.	Sh. Satinder kumar, Superintending Engineer
4.	Sh. Gurchain Singh, Executive Engineer
5.	Sh. GagganLuthra, Assistant Engineer

D. Officer of PWSSB

1.	Sh. JatinVasudev, Executive Engineer

E. Officers of Dept. of Water resources

1.	Sh. Ajit Singh, Executive Engineer

F. Officers of PSIEC

1.	Sh. Ajay Kumar Sharma, Executive Engineer

1.0 Sewage Treatment plant (STP) of capacity 50 MLD, Basti Peer Daad, Jalandhar.

1.1 Background

STP of capacity 50 MLD, installed at Basti Peer Dad, was commissioned in the year 2014 and it is based on SBR technology. The components of the STP are inlet chamber, screening chamber, grit chamber, SBR reactors, chlorination contact tank and sludge sump. Presently, the STP is being operated by the Municipal Corporation, Jalandhar

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through its operating agency namely M/s Gondwana Engg. Ltd,. Nagpur. Municipal Corporation, Jalandhar has installed electromagnetic flow meter at the inlet of STP but no such meter has been installed on final outlet of ETP. It has been granted consent to operate under the provisions of Water Act, 1974 which is valid upto 08.04.2020. Due to ineffective functioning of STP, PPCB has launched prosecution proceedings against the responsible officers of PWSSB under the provisions of Water Act, 1974 in the court of Hon'ble CJM, Jalandhar.

1.2 Visit to STP

The Monitoring Committee alongwith Officers of the PPCB, PWSSB, Municipal Corporation, Jalandhar and Officers of other departments visited 50 MLD STP Peer Daad on 03.12.2019.

1.2.1 Observations of the committee

During the visit, the monitoring committee made the following observations:

(i) Lot of sludge, extracted from drains, was found thrown within the premises of the STP. (Photo graphs are shown as per **plate 1 and plate 2**)

Plate-1: Photograph showing lot of sludge, extracted from the drains, found thrown within the premises of STP

Plate-2: Photograph showing lot of sludge, extracted from the drains, found thrown within the premises of STP

(ii) The filtrate of the centrifuging system was found stagnated outside the boundary wall of STP towards Kala Singhian Drain (Photo graphs are shown as per **plates 3 to 6**) whereas, it should have been taken into the equalization/collection tank of STP.

Plate-3: Photograph showing filtrate of the Centrifuging system stagnating outside the premises of the industry.

Plate-4: Photograph showing filtrate of the Centrifuging system stagnating outside the premises of the industry.

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Plate-5 **Plate-6**

Plates:5&6 **Photograph showing filth site of the Centrifuging system stagnating outside the premises of the industry**

(iii) The quantity of sludge lying at site was very less as compared to the quantity of sludge to be produced from such system during the operation of the STP. (Photo graph shown in **plate 7**).

Plate-7: **Photograph showing the quantity of sludge lying at site but was very less as compared to the quantity of sludge to be produced from such treatment system.**

(iv) The quantity of sludge generated at STP was mentioned as 200-250 kg/day.

(v) The representative of the Municipal Corporation, Jalandhar informed that the sludge generated from the STP is sent to the farmers from time to time to utilize by them for their agricultural fields. However, no proper record has been maintained by the operator of the STP.

(vi) The quality of treated wastewater generated at the outlet of the STP was turbid, (Photo graph as per **plate 8**), whereas, in such STPs, which are based on SBR technology, the quality of treated wastewater may be clear.

Plate-8: **Photograph showing the turbidity in the treated wastewater generated at the outlet of STP.**

1.2.2 Collection of effluent sample

In order to check the quality of the treated wastewater, in terms of various parameters, treated sewage sample was collected from final outlet of STP and the same has been sent to Punjab Pollution Control Board Laboratory for analysis. The analysis results, as received from PPCB lab, are annexed as per **Annexure -1**. These analysis results are mentioned as per **Table-1** given below:

Table-1: Analysis results of effluent sample.

Sr. No.	Parameters	Final Outlet	Stagnation B/s STP	Aeration tank of STP
1.	pH	7.4	7.5	
2.	COD, mg/l	124	226	
3.	BOD, mg/l	38	72	
4.	TSS, mg/l	36	188	
5.	F.Coli., MPN/100ml	920	-	
6.	MLSS, mg/l	-	-	2810

1.2.3 Discussion on the analysis results

As per the analysis results collected from final outlet of STP, the values of COD, BOD, TSS and F.Coli were observed as 124 mg/l, 38 mg/l, 36 mg/l and 920 mg/l, respectively. The values of parameters in the effluent sample collected from the stagnation area backside of the STP were found as 226 mg/l, 72 mg/l and 188 mg/l in terms of COD, BOD and TSS. The concentration of MLSS in the aeration tank was determined as 2810 mg/l and the same is more or less as per the required value for the biodegradation of organic matter in the aeration tank. The values of BOD: 38 mg/l in the final outlet of STP and values of BOD: 72 mg/l and TSS: 188 mg/l are higher than the permissible limits of BOD: 30 mg/l and TSS: 100 mg/l.

1.2.4 Recommendations/directions of the Monitoring Committee

Based on the discussion on the analysis results and observations of the monitoring committee, the following directions are given.

Chairman, Punjab Pollution Control Board shall initiate action to issue necessary direction under the provisions of the Water Act, 1974 as under:

1. To impose an environment compensation amounting to Rs. 10.0 lacs and the said amount may be utilized for rejuvenation of water quality of river Sutlej.
2. Chairman, PPCB shall depute a team of officers of Punjab Pollution Control Board to carry out water audit of the STP w.r.t. quantity and quality of wastewater entering into STP, concentration of biomass in aeration tank, the amount of sludge generated from the STP, quantity of filtrate from the centrifuge system & its disposal, quantity & quality of treated wastewater at the final outlet and its method of disposal.

3. Chairman, PPCB shall direct the Municipal Corporation Jalandhar as under:

   i) To provide flow meter at the outlet of sewage treatment plant.

   ii) To maintain proper record w.r.t. generation of secondary sludge from STP, its storage & the quantity of sludge sent to the farmers and balance quantity of sludge available at site.

   iii) There should be no stagnation of any effluent or filtrate of centrifuge system within or outside the premises of the STP. The filtrate of the centrifuge system may be taken into collection tank or inlet chamber.

   iv) Not to throw any sludge inside or outside its premises.

4. Chairman, PPCB shall direct Municipal Corporation, Jalandhar to monitor the operation of STP by the responsible officer of Municipal Corporation, Jalandhar especially the quality of treated sewage and generation of sludge at least twice in a week.

2.0 Municipal Solid Waste Dump Site Waryana, Kapurthala Road Jalandhar

2.1 Visit to the site.

The Commissioner, Municipal Corporation, Jalandhar apprised that the present population of Jalandhar is 11 Lakh and the quantity of generation of solid waste is about 275 TPD. The quantity of legacy waste lying at site is about 7.5 Lakh tones. Presently, for the management of the solid waste, which is generated daily, door to door collection and segregation of the waste has been started in some of the areas of Jalandhar. For the management of the wet waste, 21 compost pits have been proposed. For the management of the legacy waste, the work shall be started by 30.06.2020.

2.2 Observations of the Monitoring Committee

During the visit by the Monitoring Committee to the Municipal Solid Waste Site, following observations were made:-

1. Lot of solid waste was found dumped along the road leading to dumping site, which is the source of obnoxious odour emissions. It should be transferred to the last corner of the dump site. (photograph shown as per **plate 9**)

Plate-9: Photograph showing the lot of solid waste was found dumped along the road leading to dumping site.

2. No boundary wall/fencing has been constructed around the site.
3. No gate has been provided at the entry of the site.
4. No green belt has been developed around the site of the MSW dumping site. (Photographs shown as per plates 10 and 11)

Plate-10: Photograph showing the solid waste dumping site without any boundary, gate and green belt.

Plate-11: Photograph showing the solid waste dumping site without any boundary, gate and green belt.

5. The vehicle used to carry the solid waste have not been compartmentalized.
6. No treatment has been imparted to the leachate generated due to dumping of solid waste.

2.3 Recommendations of the Monitoring Committee

1. Municipal Corporation, Jalandhar shall comply with the observations as mentioned at point 1 to 4 above by 28.02.2020.
2. The observation no. 5, as mentioned above, shall be complied with by 31.01.2020.
3. The Municipal Corporation, Jalandhar shall install and commission effluent treatment plant to treat the leachate generated at solid waste dumping site simultaneously with the completion of the work regarding management of the legacy waste.

3.0 Outlets falling into Kala Singhian Drain

The Monitoring Committee visited the following outlets into Kala Singhian drain, which are either in operation or have been closed by the Municipal Corporation, Jalandhar/PWSSB.

i) Amardass Colony outlet:

It was observed that the said outlet carries about 25 MLD untreated sewage, which is being directly discharged into Kale Singhian Drain. The representative of Municipal Corporation, Jalandhar informed that the said outlet shall be connected to STP Phoiriwal and it shall be closed within 15 days.

ii) Sabzi Mandi outlet:

It was informed that previously the untreated sewage of Sabzi Mandi area was being discharged into Kala Singhian Drain, but now the said discharge has been diverted to STP Peer Daad and now this outlet has been closed.

3.1 Recommendations of the Monitoring Committee

After visiting the outlets along Kala Singhian Drain and flow of sewage to the said drain, the Monitoring Committee made the following recommendations:

Punjab Pollution Control Board, Municipal Corporation, Jalandhar, Deptt. of Water Sources and Department of Rural Development & Panchayat, shall carry out joint survey along Kala Singhian Drain and identify the various sources of effluent/sewage entering into Kala Singhian drain. The quantity of sewage/ effluent of each outlet, their analysis may be carried out so that the concerned department may be directed to close these outlets/discharges. Chief Environmental Engineer PPCB shall coordinate the issue and the survey should be completed within 21 days and report be submitted to the Committee.

4.0 Capitol Hospital, Pathankot Road, Jalandhar

4.1 Background

The hospital was commissioned in the year 2013 and it has been granted consent to establish (NOC) under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act 1981 vide PPCB, Zonal Office letter no. 495 dated 19.01.2012 for the bed capacity @ 250 Nos. and total built up area not more than 18000.98 m^2. The hospital was granted consent to operate under Air (Prevention & Control of Pollution) Act 1981 for the operation of 02 No. DG sets of capacity 400 KVA each with canopy and consent to operate under the provisions of Water (Prevention & Control of Pollution) Act, 1974 for the discharge of effluent about 08 m^3/day through ETP leading to collection tank of STP. Both the treated effluent through ETP and the domestic effluent about 90 m^3/day of hospital is further treated at the STP and the treated effluent is discharged onto land for plantation/gardening purpose with the premises.

4.2 Visit the Hospital and Observations

The Monitoring Committee visited the hospital on 3.12.2019 and made the following observations.

4.2.1 Observations of the Monitoring Committee

For the treatment of the hospital wastewater about 8 m^3/day, it has provided effluent treatment plant consisting of equalization tank with diffused aeration, chemical dosing tank, mixing tank, settling tank and finally the treated wastewater is discharged at the collection tank of STP of the hospital. This STP is consisted of collection tank, aerobic biological reactors (MBBR tanks 2 No.), settling tank, chlorine contact tank, sand filter and activated carbon filter. The treated wastewater is discharged onto land for plantation within the premises.

4.3 Collection of effluent samples

In order to assess the performance of ETP and STP, the effluent samples from the following points were collected:-

(i) Equalization Tank of STP

(ii) Settling tank of STP after Aeration tank

(iii) Final outlet of STP

These effluent samples have been sent to PPCB laboratory at Patiala for analysis. The analysis results, as received from PPCB laboratory, are annexed as per **Annexure-2**. These analysis results are also mentioned as per **Table 2**, given below:

Table 2:Analyses results of effluent sample

Sr. No.	Parameters	Equalization Tank of STP	Settling tank of STP after Aeration tank	Final outlet of STP
1.	pH	7.8	7.7	7.7
2.	COD, mg/l	287	233	155
3.	BOD, mg/l	83	74	48
4.	TSS, mg/l	87	66	48
5.	O&G, mg/l	BDL	BDL	BDL
6.	Bioassay	-	-	0% Survival of Fish in 100% effluent after 96 hours

4.3.1 Discussion on the analysis results and observations of the monitoring committee

The analysis results of the effluent samples collected from the equalization tank of STP indicate the values of the parameters as pH: 7.8, COD: 287 mg/l, BOD: 83 mg/l, TSS: 87 mg/l and O&G: BDL. The values of these parameters at the outlet of the settling tank of STP after aeration tank were observed as pH: 7.7, COD: 233 mg/l, BOD: 74 mg/l, TSS: 66 mg/l and O&G: BDL. Based on the analysis results, the treatment efficiency in terms of removal of COD, BOD and TSS was found as 18.8%, 10.8% and

24.1% respectively, which is quite low and indicates that the aerobic biological treatment system of the industry is not performing effectively.

Further, the values of the parameter COD, BOD, TSS and Bioassay at the final outlet of the STP were found as 155 mg/l, 48 mg/l, 48 mg/l and 0% Survival of Fish in 100% effluent after 96 hours, respectively. The values of BOD: 48 mg/l and Bioassay: 0% Survival of Fish in 100% effluent after 96 hours are higher than the permissible limits of BOD: 30 mg/l and Bioassay: 90% Survival of Fish in 100% effluent after 96 hours. Thus, the effluent treatment system provided by the Hospital authority is not efficient and effective to meet with the prescribed standard. As such, the hospital authorities need to upgrade its effluent treatment plant appropriately.

4.5 Recommendations of the Monitoring Committee

In view of the analysis results and observations of the monitoring committee as mentioned above, the following recommendations are made by the monitoring committee:

Chairman, PPCB shall initiate action to issue directions to the hospital authorities under the provisions of the Water Act, 1974 as under:

i) To impose an environment compensation amounting to Rs. 20 lakh upon the hospital authority. The said amount may be utilized for rejuvenation of quality of environment.

ii) To revoke consent to operate under the provisions of the Water Act, 1974, in case, it has been granted to the hospital authorities.

iii) The hospital authorities shall upgrade its effluent treatment plant within 3 months so as to meet with the standards prescribed by PPCB / MOEF&CC. During the upgradation, sludge drying beds (SDBs) of adequate capacity may be provided as the present SDBs are not of sufficient size and capacity.

iv) The intake capacity of patients at indoor facility of the hospital should be reduced by 20% till the upgradation in the effluent treatment plant is made.

5.0 Shital Fibres Ltd., A-17, Focal Point, Jalandhar

5.1 Background

The industry was commissioned at site from 1994. It is a is large scale unit engaged in the manufacturing of blankets © 3000 nos./day. It is engaged in dyeing and printing processes. The industry has installed Effluent Treatment Plant in its premises where trade effluent from its premises as well as from its sister concern units (located at adjacent plots) is being treated. The details of the industries and their effluent discharge are mentioned as under:

Sr. No.	Name & Address of sister concern unit	Discharge (m^3/day)
1.	M/s Shital Fiber Ltd., A-17, Focal Point, Jalandhar	200
2.	M/s Chinar Forge Ltd., C-84-86, Focal Point, Jalandhar	50
3.	M/s Shital Exports, C-77-78-79-80, Focal Point, Jalandhar	50
4.	M/s Shital Fiber Ltd., C-112, Focal Point, Jalandhar	50
5.	M/s Shital Spinning Mills, C-110, Focal point, Jalandhar	10
Total		**360**

Thus, total effluent generation from the industry and its sister concern units is 360 m3/day. The industry has installed effluent treatment plant consisting of collection tank →equalization tank → Chemical dosing system → Primary settling tank →aeration system→ secondary settling tank→ sand filter → activated carbon filter → final outlet leading to PSIEC sewer.

The industry has been granted permission for disposal of treated trade effluent © 360 m3/day after treatment in Common Effluent Treatment Plant installed at A-17, Focal Point, Extn. Jalandhar and domestic effluent @ 4.0 KLD into PSIEC sewer. It has been granted consents to operate under the provisions of Water Act, 1974 and Air Act, 1981 both are valid upto 30.6.2023.

5.2 Visit to the industry

The Monitoring Committee visited common effluent treatment plant of the industry and its sister concern units as mentioned above. Effluent treatment system is consisting of collection tank →equalization tank → Chemical dosing system → Primary settling tank → aeration tank → secondary settling tank → sand filter → activated carbon filter → final outlet leading to PSIEC sewer.

5.3 Collection of effluent samples

In order to assess the performance of ETP, effluent samples from the following points were collected.

1. Equalization tank of ETP
2. Outlet of primary settling tank of ETP
3. Aeration tank
4. Outlet of secondary settling tank
5. Final outlet of ETP

The effluent samples were sent to Punjab Pollution Control Board, laboratory at Patiala for analysis. The analysis results, as received from Punjab Pollution Control Board laboratory, are annexed as per **Annexure-3**. These analysis results are mentioned in **Table 3** given below.

Table 3: Analysis results of effluent samples

Sr. No.	Parameters	Equalization tank of ETP	Outlet of primary settling tank of ETP	Aeration tank	Outlet of secondary settling tank	Final outlet of ETP
1.	pH	6.1	6.5	-	6.5	6.6
2.	COD, mg/l	995	980	-	1128	750
3.	BOD, mg/l	290	286	-	361	245
4.	TSS, mg/l	188	195	-	154	109
5.	TDS, mg/l	598	706	-	558	534
6.	O&G, mg/l	BDL	BDL	-	BDL	BDL
7.	Colour (Co-pt scale)	80	90	-	320	300
8.	Ammonical Nitrogen, mg/l	10.5	8.4	-	8.2	2.9
9.	Sulphide, mg/l	4.9	BDL	-	BDL	BDL
10.	Phenolic Compound, mg/l	BDL	BDL	-	BDL	BDL
11.	Total Chrome, mg/l	BDL	BDL	2430	BDL	BDL
12.	MLSS, mg/l	--	-	2430	-	-

5.3.1 Discussion on the analysis results and Observations of the Monitoring Committee

As per the analysis results, the values of the parameters namely pH, COD, BOD, TSS, TDS, O&G, Colour, Ammonical Nitrogen, Sulphide, Phenolic Compound and Total Chrome were observed as 6.1, 995 mg/l, 290 mg/l, 188 mg/l, 598 mg/l, BDL, 80 Co-pt scale, 10.5 mg/l, 4.9 mg/l, BDL and BDL, respectively.

The values of the parameters at the outlet of primary settling tank of ETP were observed as pH: 6.5, COD: 980 mg/l, BOD: 286 mg/l, TSS: 195 mg/l, TDS: 706 mg/l, O&G: BDL, Colour: 90 Co-ptscale, Ammonical Nitrogen: 8.4 mg/l, Sulphide: BDL, Phenolic Compound: BDL and Total Chrome: BDL. The concentration of Biomass (MLSS) in the aeration tank was found as 2430 mg/l, which may be appropriate value to degrade the organic matter. The treatment efficiency in terms of removal of COD, BOD and Ammonical Nitrogen was determined as 1.5%, 1.4% and 20%, respectively, which is almost negligible in terms of removal of BOD and COD.

The values of the parameters at the outlet of secondary settling tank were found as pH: 6.5, COD: 1128 mg/l, BOD: 361 mg/l, TSS: 154 mg/l, TDS: 558 mg/l, O&G: BDL, Colour: 320 Co-ptscale, Ammonical Nitrogen: 8.2 mg/l, Sulphide: BDL, Phenolic Compound: BDL and Total Chrome: BDL. It is mentioned here that the values of COD, BOD and Colour has been increased from 980 mg/l, 286 mg/l and 90 Co-pt scale, respectively, to 1128 mg/l, 361 mg/l and 320 Co-pt scale, whereas, these values should have been reduced at the outlet of the secondary settling tank. It means that the secondary settling tank after aeration tank is not functioning properly and the sludge is not being settled properly.

At the final outlet of ETP, the values of the parameters were observed as pH: 6.6, COD: 750 mg/l, BOD: 245 mg/l, TSS: 109 mg/l, TDS: 534 mg/l, O&G: BDL, Colour: 300 Co-pt scale, Ammonical Nitrogen: 2.9 mg/l, Sulphide: BDL, Phenolic Compound: BDL and Total Chrome: BDL. The treatment efficiency in terms of removal of COD, BOD, TSS and Ammonical Nitrogen was found as 33.5%, 32.1%, 29.2% and 64.6%, respectively.

The above analysis results indicate that the values of BOD: 245 mg/l, COD: 750 mg/l and TSS: 109 mg/l are higher than the prescribed limits of BOD: 30 mg/l, COD: 250 mg/l and TSS: 100 mg/l. Thus, the industry is not meeting with the standards prescribed by the PPCB/MOEF&CC.

6.0 Comments on the representation dated 11.12.2019 given by M/s Shital Fibres Ltd., Focal Point, Extn., Jalandhar regarding visit of the NGT monitoring committee dated 03.12.2019.

The industry namely M/s Shital Fibres Ltd., Focal Point, Extn., Jalandhar vide its representation dated 11.12.2019 (letter enclosed in original as per **Annexure-4**) has claimed that the industry is an environmentally compliant unit and effluent samples collected on regular basis from ETP installed by it are always within the environmental norms. The analysis results have been mentioned at page-1 of its representation. The industry has further claimed that during the visit of the NGT monitoring committee on 03.12.2019, the industry had already closed its wet process (printing and washing). However, as the effluent sample were to be collected from the ETP and ETP was forced into operation and samples were collected from back wash of the Carbon and Sand filter installed in the final area of the ETP due to which the effluent samples are not representative in nature. Further, the industry is not even discharging single drop of ints factory premises in an unauthorized manner. The industry has employed trained man power for the operation of ETP and suggestion towards obligations / improvement in the working of ETP will be judiciously worked upon.

With regard to the contents as mentioned in the representation, it is mentioned here that the industry was in operation and various components of ETP were also in operation. Though the industry has claimed that it had closed its wet process (printing and washing) but the effluent was lying stored in the collection cum equalization tank and the effluent was being regularly lifted and put into the tank where chemical dosing was being imparted and was being settled in the primary settling tank. The aeration tank and secondary settling tank of ETP were also in operation. The effluent sample from the various points such as equalization tank of ETP, outlet of primary settling tank, aeration tank, outlet of secondary settling tank were collected. However, while collecting the effluent samples from the final outlet i.e. after the last activated carbon filter, the pump of the system started blowing air and the effluent sample from the last activated carbon filter became difficult to collect, therefore, the effluent sample from the final treated effluent lying in the container, where probe of online effluent

monitoring system was inserted and the reading which was being displayed on the OCEMS was mentioning the reading of pH: 6.88, COD: 135.2 mg/l, TSS: 32.3 mg/l and BOD: 16.1 mg/l. The photographs of the display of the OCEMS and probe inserted into the container containing final treatec effluent as mentioned by the owner of the industry and other representative of the industry are mentioned as per **plate 12 & 13.**

Plate-12

Plate 12: Screen/Display of OCEMS showing parameters pH: 6.88, COD: 135.2 mg/l, TSS: 32.3 mg/l and BOD: 16.1 mg/l.

Photograph showing the probe of OCEMS inserted into the container containing final treated effluent.

Had the container containing back washing effluent of carbon and sand filter, as claimed in the representation made by the industry, the screen displaying the values of pH: 6.88, COD: 135.2 mg/l, TSS: 32.3 mg/l and BOD: 16.1 mg/l would not be there and the values of these parameters would have been quite different from the present values. If we assume that the effluent lying in the container, where the probe of OCEMS was inserted, was back wash effluent then now the screen of the system was showing lower values of the parameters. It means the industry had tempered its OCEMS to show the values of the parameters always within the norms irrespective of that it may contain treated or untreated effluent.

Thus, the claim of the industry as mentioned in its representation is absolutely unjustified and unacceptable. The monitoring committee does not agree with the contents mentioned in the representation.

7.0 Recommendations of the Monitoring Committee

In view of the analysis results and observations of the monitoring committee, the following recommendations are made:

Chairman, PPCB shall initiate action to issue following directions under the provisions of the Water Act, 1974 as under:

i) To impose an environment compensation amounting to Rs. 50 lakh upon the industry, which may be shared by its sister concern units in proportion to the

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effluent discharge of individual industry. The said amount may be utilized for rejuvenation of water quality of river Sutlej.

ii) To revoke consent to operate under the provisions of the Water Act, 1974 granted to the industry as well as its sister concern units.

iii) The industry shall upgrade its effluent treatment plant within 3 months to ensure to achieve the standards prescribed by PPCB/MOEF&CC.

iv) The production capacity of the industry and its sister concern units may be reduced by 20% till the achievement of the standards.

v) The industry shall install online effluent monitoring system (OCEMS) at the appropriate location at the outlet of effluent treatment plant in such a way that whole of the treated wastewater should pass through the system in which probe of OCEMS is inserted.

8.0 M s H.R International unit-2, C-107-108, Focal Point Extn, Jalandhar.

8.1 Background

M/s H.R International (unit-2), C-107-108, Focal Point (Extension), Jalandhar was commissioned in the year 2001. It is small scale unit engaged in the manufacturing of hand tools items © 3 TPD. The industry has installed electroplating system and is giving its trade effluent for treatment to Common Effluent Treatment Plant (CETP) for electroplating industries at Ludhiana. The industry has also installed barreling process and effluent from barreling section is reused in process through sedimentation tank. The industry has been granted permission for disposal of trade effluent @ 30 KL/month generated from electroplating process to CETP, Phase-VIII Ludhiana and domestic effluent 14 KLD into PSIEC sewer. It has been granted consent to operate under the provisions of Water Act, 1974 valid upto 30.6.2021. It has also been granted consent to operate under Air (Prevention & Control of Pollution) Act, 1981 valid upto 30.06.2021.

8.2 Visit to the industry and Observations

Monitoring Committee visited the industry on 3.12.2019 and observed that it has installed electroplating process and as claimed by the representative of the industry, the discharge from electroplating process of the industry is about 30 m3/month and the same is sent to Common Effluent Treatment Plant (CETP), installed for treatment of electroplating effluent, at Ludhiana.

During visit, it was observed that it has fitted one underground Syntax tank of capacity 5000 liters for the collection and storage of electroplating effluent. At the time of visit, the quantity of effluent lying stored in storage tank was measured as about 2700 liters. The representative of the industry claimed that it has got lifted its effluent lastly on 29.11.2019.

The Monitoring Committee felt that there is need to carry out detailed Water Audit of the industry as it is getting lift its trade effluent to CETP operator at Ludhiana.

8.3 Recommendations of the Monitoring Committee

Chairman, Punjab Pollution Control Board shall constitute a team under the Headship of Chief Environmental Engineer, Jalandhar to carry out comprehensive water Audit of the industry w.r.t different processes involved to manufacture the products of the industry, quantity of effluent generated from different streams of different processes, treatment/recycling system to the streams other than electroplating process, quantity of effluent generated from electroplating process, capacity of storage tank, frequency of lifting of electroplating effluent by CETP operator, balance quantity of effluent in the storage tank after lifting its effluent, matching of all the above data and discrepancy, if any.

The team shall submit its detailed report along with its recommendations to Chairman PPCB before 15.1.2020. Chairman PPCB shall take action on the recommendations of the team as per provisions of the Water Act, 1974, within next 15 days after the receipt of the report of the team, under intimation to the Committee.

Dr. Babu Ram	**Sant Balbir Singh Seechewal**	**S.C. Agarwal**	**Justice Jasbir Singh, Former Judge Punjab & Haryana High Court now as Chairman of the monitoring committee**

Annexure-I

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

TC-7045

1	Laboratory Sample No.	E 1600-1602/H.O.Lab. Monitoring/2019
2	U.I.R No.	TC70451800000000165GP
3	Name of Industry	M/s STP Peer Dad 150 MLD SBR Tech based Jalandhar
4	Name of Sample collecting Officer	Er. Sandeep Kumar, AEE
5	Designation of Officer authorizing Test	EE, RO Jalandhar
6	Type of Sample	Grab
7	Date &Time of Sample collection	03.12.19
8	Date &Time of Sample receipt in Lab.	04.12.19
9	Period of Analysis	04.12.19 to 17.12.19
10	Test Methods	As per relevant parts of IS:3025 IS:1622 & Method of APHA

Results

Sr. No.	Parameters	Final outlet	Stagnation B/S STP	Aeration tank of STP
1	pH	7.4	7.5	
2	Chemical Oxygen Demand mg/l	124	226	
3	Bio-chemical Oxygen Demand mg/l	38	72	
4	Total Suspended Solids mg/l	36	188	
5	*Feacal coliform MPN/100ml	920	-	
6	*Mixed Liquid Suspended Solids mg/l	-	-	2810

* Not covered under the scope of NABL

---End of Report---

18/12/19

Analyzed By

Scientific Officer

Endst. No: 38011-12 dt/c Dt. 19-12-19

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, Jalandhar

18/12/19

Jr. Scientific Officer

Annexure-2

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

TC-7045

1.	Laboratory Sample No.	E 1592-1594/H.O.Lab. Monitoring/2019
2.	ULR No.	TC704518000000001654P
3.	Name of Industry	M/s Capital Hospital Pathankot Road, Jalandhar
4.	Name of Sample collecting Officer	Er. Sandeep Kumar, AEE
5.	Designation of Officer authorizing Test	EE, RO Jalandhar
6.	Type of Sample	Grab
7.	Date &Time of Sample collection	03.12.19
8.	Date &Time of Sample receipt in Lab.	04.12.19
9.	Period of Analysis	04.12.19 to 17.12.19
10.	Test Methods	As per relevant parts of IS:3025 IS:1622 & Method of APHA

Results .

Sr. No.	Parameters	Final outlet of STP	EQ Tank of STP	Settling tank of STP after Aeration tank
1	pH	7.7	7.8	7.7
2	Chemical Oxygen Demand mg/l	155	287	233
3	Bio-chemical Oxygen Demand mg/l	48	83	74
4	Total Suspended Solids mg/l	48	87	66
5	*Oil & Grease mg/l	BDL.	BDL.	BDl
6	*Bioassay	0 % Survival of Fish in 100% effluent after 96 hours	-	-

* Not covered under the scope of NABL

---End of Report---

18/12/19

Analyzed By

Scientific Officer

Endst. No: 38007-08 Dt. 19-12-19

A copy of the above is forwarded to the:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, Jalandhar

19.12.19

Jr. Scientific Officer

Annexure-3

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA
WATER ANALYSIS REPORT

TC-7045

1	Laboratory Sample No.	E 1595-1599/H.O.Lab. Monitoring/2019
2.	ULR No.	TC70451800000000001655P
3.	Name of Industry	M/s Shital Fibres Ltd. A-17, Focal Point, Jalandhar
4	Name of Sample collecting Officer	Er. Sandeep Kumar, AEE
5	Designation of Officer authorizing Test	EE, RO Jalandhar
6	Type of Sample	Grab
7	Date & Time of Sample collection	03.12.19
8	Date & Time of Sample receipt in Lab.	04.12.19
9	Period of Analysis	04.12.19 to 17.12.19
10	Test Methods	As per relevant parts of IS 3025 IS 1622 & Method of APHA

Results

Sr. No.	Parameters	EQ tank of ETP	Outlet of primary settling tank of ETP	Aeration tank	Outlet of secondary settling tank	Final outlet of ETP
1	pH	6.1	6.5	-	6.5	6.6
2	Chemical Oxygen Demand mg/l	995	980	-	1128	750
3	Bio-chemical Oxygen Demand mg/l	290	286	-	361	245
4	Total Suspended Solids mg/l	188	195	-	154	109
5	Total dissolved solids mg/l	598	706	-	558	534
6	*Oil & Grease mg/l	BDL	BDL	-	BDL	BDL
7	*Colour (Co-pt scale)	80	90	-	320	300
8	*Ammonical Nitrogen mg/l	10.5	8.4	-	8.2	2.9
9	*Sulphide mg/l	4.9	BDL	-	BDL	BDL
10	*Phenolic Compound mg/l	BDL	BDL	-	BDL	BDL
11	Total Chrome mg/l	BDL	BDL	-	BDL	BDL
12	*Mixed Liquid Suspended Solids mg/l	--	-	2430	-	-

* Not covered under the scope of NABL

---End of Report---

18/12/19

Analyzed By

Scientific Officer

Endst No: 38009-10 dt. Dt. 19-12-19

A copy of the above is forwarded to the :-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I Patiala
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office, Jalandhar

18/12/19

Jr. Scientific Officer

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Annexure-4

shital FIBRES LIMITED

(A Govt. of India Recognised Star Export House)

Manufacturers & Exporters of All Type of Blankets and Carpets

Registered Office :
A-17, Focal Point (Extension)
P.O. Box No. 407 & 449
JALANDHAR-144 004
INDIA

(An ISO-9001:2008 & 14001:2004 Certified Company)

Tel : 91-181-2603001, 2603003, 2603004
91-181-2600001, 5083421
Fax : 91-181-2600011, 5083422
E-mail : shital@shitalgroups.com
sales@shitalgroups.com
Website : http://www.shitalexport.com
CIN : U17219PB1993PLC0133

To

Dated:11.12.2019

The Hon'ble Justice Jasbir Singh,
Former Judge, Punjab & Haryana High Court,
Tower No. 5, 4th Floor, Forest Complex,
Sector-68, SAS Nagar.

Subject: **Representation of M/s Shital Fibres Ltd., Focal Point Extn. Jalandhar regarding visit of NGT Monitoring Committee dated 03-12-2019.**

It is respectfully submitted that we have always been an environmentally compliant unit. Our unit has been monitored several times by the concerned officials and effluent samples have also been collected on regular basis from the ETP installed by us and we have always ensured that our best efforts are put forth to ensure compliance towards the environmental norms. We have already granted consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 with validity upto 2023. The detail of the last 8 sample collected by the Board's lab are exhibited below:

Sr. No.	Parameters	25.1.19	21.2.18	8.6.17	26.7.16	4.3.16	30.9.15	9.7.15	28.3.15
1.	pH	7.8	7.5	7.6	7.5	7.2	7.0	7.2	7.4
2.	COD (mg/l)	136	120	120	160	168	116	124	56
3.	BOD (mg/l)	18	25	17	28	26	26	26	20
4.	TSS (mg/l)	34	44	77	64	38	34	112	38
5.	TDS (mg/l)	412	780	-	-	-	-		-
6.	O & G (mg/l)	BDL	-	5.8	ND	3.0	2.6	2.2	1.1
7.	Sulphide (mg/l)	BDL	ND	ND	0.2	ND	ND	ND	ND
8.	Phenolic Compound (mg/l)	BDL	ND	ND	ND	ND	ND	ND	ND
9.	Ammonical Nitrogen (mg/l)	6	4.0	-	-	-	-	-	-
10.	SAR	1.7	-	-	-	-	-	-	-
11.	Total Chrome (mg/l)	BDL	-	-	--	-	-	-	-
12.	Bio-Assay	-	-	90& survival of fish in 100% effluent after 96 hours	90& survival of fish in 100% effluent after 96 hours	90& survival of fish in 100% effluent after 96 hours	90& survival of fish in 100% effluent after 96 hours	90& survival of fish in 100% effluent after 96 hours	90& survival of fish in 100% effluent after 96 hours

Contd....2

shital FIBRES LIMITED

(A Govt. of India Recognised Star Export House)

Manufacturers & Exporters of All Type of Blankets and Carpets

Registered Office :
A-17, Focal Point (Extension)
P.O. Box No. 407 & 449
JALANDHAR-144 004
INDIA

(An ISO-9001:2008 & 14001:2004 Certified Company)

Tel : 91-181-2603001, 2603003, 2603004
91-181-2600001, 5083421
Fax : 91-181-2600011, 5083422
E-mail : shital@shitalgroups.com
sales@shitalgroups.com
Website : http://www.shitalexport.com
CIN : U17219PB1993PLC0133

During the visit of the NGT Monitoring Committee on 03-12-2019, we had already closed our wet process (Printing and Washing), however, as the effluent samples were to be collected from the ETP, the ETP was forced into operation and samples were collected from the backwash of the carbon and sand filter installed in the final area of the ETP due to which the effluent samples and these samples are not representative in nature. It is also submitted that not even a single drop from our factory premises is discharged in an unauthorized manner (Kala Singian drain) as verified by the Monitoring Committee during the visit.

It is also informed that only Azo-free dyes are used in the printing process and chemical free water is generated. We have employed trained personnel for the operation of ETP and any suggestions towards upgradation/improvement in the working of ETP as suggested by the Monitoring Committee will be judiciously worked upon. We promise that we will always abide by the Environmental laws in future.

In view of above, it is humbly requested that the above mentioned facts be kindly considered and a lenient attitude be adopted by the Monitoring Commitee.

Yours Sincerely
For Shital Fibres Limited

Director

Encl : Analyes Reports

CC to

1) Sh. Balbir Singh Seechewal Ji
2) Sh. S.C. Aggarwal, Member, NGT Committee
3) Dr. Babu Ram Ji, Member, NGT Committee
4) Hon'ble Chairman, Punjab Pollution Control Board
5) Hon'ble Member Secretary, Punjab Pollution Control Board

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਪ੍ਰਯੋਗਸ਼ਾਲਾ, ਫੋਕਲ ਪੁਆਇੰਟ, ਪੀ:ਐਸ:ਆਈ:ਈ:ਸੀ ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ.

ਫੋਨ ਨੰਬਰ : 0181-2600301 www.ppcb.gov.in ਈ-ਮੇਲ : zolabjalandhar@gmail.com .

ਨੰਬਰ..... ਮਿਤੀ .....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 248 /2019
2.	Name of industry	M/s Shital Fibres Ltd, A-17, Focal Point Extn, Jalandhar.
3.	Name of Sample Collecting Officer	Er. Ravideep Singla (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	25.01.2019
6.	Date of Sample Receipt in Lab	26.01.2019
7.	Point of sample collection	As per data sheet

RESULTS

S. No	PARAMETERS	RESULTS
1.	pH	7.8
2.	COD (mg/l)	136
3.	BOD (mg/l)	18
4.	TSS (mg/l)	34
5.	TDS (mg/l)	442
6.	O & G (mg/l)	BDL
7.	Sulphide (mg/l)	BDL
8.	Phenolic Compound (mg/l)	BDL
9.	Ammonical Nitrogen (mg/l)	6
10.	SAR	1.7
11.	Total Chrome (mg/l)	BDL

Sample Analyzed by: - 4/2 4/2/19
Sh. Onkar Singh
Ms. Mamta

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 394-95 Dated: 6/2/19

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal office, Jalandhar.
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

5/2

Asstt Scientific Officer-II
Zonal Lab, Jalandhar

A66/IV Zonal Office Analysis Reports

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਪ੍ਰਯੋਗਸ਼ਾਲਾ, ਫੋਕਲ ਪੁਆਇੰਟ, ਪੀ:ਐਸ:ਆਈ:ਈ:ਸੀ ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ
ਫੋਨ ਨੰਬਰ : 0181-2600301 www.ppcb.gov.in ਈ-ਮੇਲ : zolabjalandhar@gmail.com

ਨੰਬਰ.....

ਮਿਤੀ.....

ਸੇਵਾ ਵਿਖੇ, ਸਹਾਇਕ ਇੰਜੀਨੀਅਰ, ਜਲੰਧਰ
ਸ਼ਾਇਤੀ ਨੰ. 1313
ਮਿਤੀ. 12/3/18

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 327 /2018
2.	Name of industry	M/s Shital Fibre Ltd, A-17, Focal Point, Jalandhar.
3.	Name of Sample Collecting Officer	Er. Jatinder Kumar (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	21.02.2018
6.	Date of Sample Receipt in Lab	22.02.2018
7.	Point of sample collection	As per data sheet

RESULTS

Sr. No	PARAMETERS	RESULTS
1.	pH	7.5
2.	COD (mg/l)	120
3.	BOD (mg/l)	25
4.	TSS (mg/l)	44
5.	TDS (mg/l)	780
6.	Sulphides (ਅਣਪਤਾ)	ND
7.	Phenolic Compounds(ਅਣਪਤਾ)	ND
8.	Ammonical Nitrogen (ਅਣਪਤਾ)	4.0

Sample Analyzed by: -
[redacted]nkar Singh

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 503-04

Dated: 8/3/18

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal office, Jalandhar.
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Asstt Scientific Officer
Zonal Lab, Jalandhar

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜ਼ੋਨਲ ਦਫਤਰ ਦੂਜੀ ਮੰਜ਼ਿਲ, ਨੇੜੇ ਪੀ.ਐਸ.ਆਈ.ਈ.ਸੀ. ਫਾਟਕ ਨੰ. 2, ਜਲੰਧਰ
Phone No. 0181-2601612 Email ID – seeppcbjal@gmail.com
ਨੰਬਰ..... ਮਿਤੀ .....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 69 /2017
2.	Name of Industry	M/s Shital Fiber Ltd. A-17 Focal Point Extn. Jalandhar
3.	Name of Sample Collecting Officer	Er. Jatinder Kumar(AEE) S.Onkar Singh (ASO)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	08.06.2017
6.	Date of Sample Receipt in Lab	09.06.2017
7.	Point of sample collection	As per data sheet

RESULTS

Sr. No	PARAMETERS	RESULTS
1.	pH	7.6
2.	COD (mg/l)	120
3.	BOD (mg/l)	17
4.	TSS (mg/l)	77
5.	Oil & Grease (mg/l)	5.8
6.	Bio-Assay	90% Survival of Fish in 100% effluent After 96 Hrs.
7.	Sulphide	ND
8.	Phenolic Compound	ND

Sample Analyzed by:-

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 5420-21 Dated: 23-6-17

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar.
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Asstt Scientific Officer
Zonal Lab, Jalandhar

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਦਫ਼ਤਰ ਫੋਕਲ ਪੁਆਇੰਟ, ਨੇੜੇ ਪੀ.ਐਸ.ਆਈ.ਈ.ਸੀ. ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ
Phone No. 0181-221612 Email ID – seoppcb@gmail.com
ਨੰਬਰ..... ਮਿਤੀ .....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 113 /2016
2.	Name of Industry	M/s Shital Fibres Ltd. A-17 Focal Point Extn. Jalandhar
3.	Name of Sample Collecting Officer	Er. Jatinder Kumar (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	26.07.2016
6.	Date of Sample Receipt in Lab	27.07.2016
7.	Point of sample collection	As per data sheet

RESULTS

Sr. No	PARAMETERS	RESULTS
1.	pH	7.5
2.	COD (mg/l)	160
3.	BOD (mg/l)	28
4.	TSS (mg/l)	64
5.	Oil & Grease (mg/l)	ND
6.	Bio-Assay (mg/l)	90% Survival of Fish in 100% effluent After 96 Hrs.
7.	Sulphide (mg/l)	0.2
8.	Phenolic Compound (mg/l)	ND

Sonal Dogra 4/8/16
Sample Analyzed by:-

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. C924-25 Dated: 8/8/16

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar.
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Ankur 8/8/16
Asstt Scientific Officer
Z.O. Jalandhar

Zonal Lab, Jalandhar

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਦਫ਼ਤਰ ਡੈਕਲ ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ,ਐਸ.ਆਈ.ਈ.ਸੀ. ਵਾਟਰ ਟੈਂਕ, ਜਲੰਧਰ
Phone No. 0181-221612 Email ID – seeppcb@gmail.com
ਨੰਬਰ..... ਮਿਤੀ.....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 323/2016
2.	Name of industry	M/s Shital Fiber LTD. A-17 Focal Point Extn. Jalandhar
3.	Name of Sample Collecting Officer	Er. Pooja Sharma (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	04.03.2016
6.	Date of Sample Receipt in Lab	05.03.2016
7.	Point of sample collection	As per data sheet

RESULTS

Sr. No	PARAMETERS	RESULTS
1.	pH	7.2
2.	COD (mg/l)	168
3.	BOD (mg/l)	26
4.	TSS (mg/l)	38
5.	Oil & Grease (mg/l)	3.0
6.	Bio-Assay	90% Survival of Fish in 100% effluent After 96 Hrs.
7.	Sulphide	ND
8.	Phenolic Compound	ND

Sample Analyzed by:-

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 2466-67 Dated: 21/3/16

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar.
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

2778 dtd. 21/3/16

Asstt Scientific Officer
Zonal Lab, Jalandhar

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜ਼ੋਨਲ ਦਫ਼ਤਰ ਫੈਕਲ ਪੁਆਇੰਟ, ਨੇੜੇ ਪੀ.ਐਸ.ਆਈ.ਈ.ਸੀ. ਫਾਟਕ ਟੈਕ, ਜਲੰਧਰ

Phone No. 0181-221612

Email ID – seepropcb@gmail.com

ਨੰਬਰ.....

ਮਿਤੀ.....

ਈ ਨਵੀਂ ਡਾਕ

ਨਵੀਂ ਡਾਕ

ਸੀ.ਚਾ. ਇੰਜ.

3719

2/11/15

ਜ਼ੋਨ, ਜਲੰਧਰ

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water / 36 /2015
2.	Name of industry	M/S Shital Fiber Ltd. Focal Point Extn. Jalandhar
3.	Name of Sample Collecting Officer	Er. Satyajeet Singh Attri (AEE)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	30.09.2015
6.	Date of Sample Receipt In Lab	01.10.2015
7.	Point of sample collection	As Per Data Sheet

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9/11/15

13/11

Put up on file R, d

RESULTS

Sr. No	PARAMETERS	RESULTS
1.	pH	7.0
2.	COD (mg/l)	116
3.	BOD(mg/l)	26
4.	TSS (mg/l)	34
5.	Bio-Assay	90% Survival of Fish In 100% effluent After 96 Hrs.
6.	Sulphide	ND
7.	Phenolic Compound	ND
8.	Oil & Grease (mg/l)	2.6

Sample Analyzed by:- 19/10/15

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 8024-25

Dated: 23/10/15

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Asstt Scientific Officer
Zonal Lab, Jalandhar

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਦਫਤਰ ਖੇਤਰੀ ਪ੍ਰਯੋਗਸ਼ਾਲਾ, ਨੇੜੇ ਪੀ.ਐਸ.ਆਈ.ਈ.ਸੀ. ਢਾਣਕ ਟੈਂਕ, ਜਲੰਧਰ
Phone No. 0181-221612
Email iD – seeppcb@gmail.com

ਨੰਬਰ..... ਮਿਤੀ .....

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No.	Lab/Water / ~~7~~ 2-/2015
2.	Name of industry	*M/S Shital Fabres Ltd. A-17 Focal Point Extn. Jalandhar*
3.	Name of Sample Collecting Officer	Er. Sandeep Kaur (AEE) S. Onkar Singh (ASO)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	09.07.2015
6.	Date of Sample Receipt in Lab	10.07.2015
7.	Point of sample collection	As Per Data Sheet

RESULTS

Sr. No	NAME OF THE PARAMETERS	RESULTS
1.	pH	7.2
2.	COD (mg/l)	124
3.	BOD(mg/l)	26
4.	TSS (mg/l)	112
5.	Bio-assay	90% Survival of Fish in 100% effluent After 96 Hrs.
6.	Oil & Grease (mg/l)	2.2
7.	Phenolic Compound	ND
8.	Sulphides	ND

22/7/15

Asstt Scientific Officer-I
Zonal Lab, Jalandhar

Endst.No. 5047-48 Dated: 24/7/15

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules.

Asstt Scientific Officer
Zonal Lab, Jalandhar

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ

ਜੋਨਲ ਦਫਤਰ ਫੋਕਲ ਪੁਆਇੰਟ, ਨੇੜੇ ਪੀ.ਐਸ.ਆਈ.ਈ.ਸੀ. ਫਾਟਕ ਟੈਕ, ਜਲੰਧਰ
Phone No. 0181-221612 Email ID – seezolal2009@gmail.com
ਨੰਬਰ..... ਮਿਤੀ .....

AEE-II

AIR/WATER SAMPLE ANALYSIS REPORT

1.	Laboratory Sample No	Lab/Water [illegible] /2015
2.	Name of industry	M/S Shital Fibres Ltd. A.17 Focal Point Extn Jalandhar
3.	Name of Sample Collecting Officer	Er. Sandeep Kaur (AEE) S. Onkar Singh (ASO)
4.	Type of Sample	Grab Monitoring
5.	Date of Sample Collection	28/03/2015
6.	Date of Sample Receipt in Lab	29/03/2015
7.	Point of sample collection	As Per Data Sheet

RESULTS

Sr. No	NAME OF THE PARAMETERS	RESULTS
1.	pH	7.4
2.	COD (mg/l)	56
3.	BOD(mg/l)	20
4.	TSS (mg/l)	38
5.	Sulphides	~~< 0.2~~ N.D
6.	Oil & Grease (mg/l)	1.1
7.	Bio Assay	90% Survival of Fish in 100% effluent After 95 Hours
8.	Pherolic	ND

Scientific Officer
Zonal Lab, Jalandhar

Dated: 30/4/15

Endst.No. 2979-80

A copy of the above is forwarded to the following for information & necessary action along with data sheet to:-

1. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Jalandhar
2. The Environmental Engineer, Regional Office, Jalandhar along with extra copy of analysis report and data sheet for further transmission to the industry as per rules. The result already conveyed to Head Office.

Asstt Scientific Officer
Zonal Lab, Jalandhar

Annexure-7

Office of the Monitoring Committee

Constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh & others v/s State of Punjab and others and OA no. 606 of 2018 in the matter of compliance of Solid Waste Management Rules, 2016.

(Office at. 4th floor, 5th tower, Forest Complex, Sector-68, Mohali)

To

The Deputy Commissioner,
Fazilka.

No. CMC /2020/316
Dated : 20/01/2020

Subject:- Report on compliance of order dated 17.12.2019 of the Hon'ble National Green Tribunal in OA no. 596 of 2019 in the matter of Vikran Ahuja V/s State of Punjab & others.

Please find enclosed herewith a report on compliance of order dated 17.12.2019 of the Hon'ble National Green Tribunal in OA no. 596 of 2019 in the matter of Vikran Ahuja V/s State of Punjab & others mentioning the visit to the drainage system carrying seepage/ sludge and treated/ untreated sewage of towns falling the jurisdiction of Distt Fazilka, Ferozepur, Faridkiot, Moga and Sri Muktsar Sahib and further culminating at Fazilka and minutes of the meeting with District level officers of Distt. Fazilka, Ferozepur, Faridkiot, Moga and Sri Muktsar Sahib on 07.01.2020 for your kind information and necessary action please.

It is requested that the concerned officer be directed to convey the report of the monitoring committee to the Distt. Level officers of the concerned departments and Deputy Commissioner of Districts Ferozepur, Faridkiot, Moga and Sri Muktsar Sahib to take necessary action on the issues relating to their departments and these departments may be asked to submit the action taken report within 15 days.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Endst. No.....317..... Dated.20/01/2020

A copy of the above is forwarded to the Chairman, Punjab Pollution Control Board, Patiala for information and necessary action please. He is requested to take necessary action on the items / issues relating to PPCB and action taken report be submitted within 15 days.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Endst. No.....318..... Dated.20/01/2020

A copy of the above is forwarded to the Chief Executive Officer, Punjab Water Supply & Sewerage Board, Sector-35, Chandigarh for information and necessary action please. He is requested to take necessary action on the items / issues relating to their department and action taken report be submitted within 15 days.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Endst. No. 319 Dated 20/01/2020

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, Department of Water Resources, Chandigarh for information and necessary action please. He is requested to take necessary action on the items / issues relating to their department and action taken report be submitted within 15 days.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Endst. No. 320 Dated 20/01/2020

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, Department of Water Supply & Sanitation, Chandigarh for information and necessary action please. He is requested to take necessary action on the items / issues relating to their department and action taken report be submitted within 15 days.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Endst. No. 321 Dated 20/01/2020

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, Department of Local Govt., Sector-35, Chandigarh for information and necessary action please. He is requested to take necessary action on the items / issues relating to their department and action taken report be submitted within 15 days.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Endst. No. 322 Dated 20/01/2020

A copy of the above is forwarded to the Principal Secretary to Govt. of Punjab, Department of Science Technology & Environment, Chandigarh for information and necessary action please.

DA/as above

Dr. Babu Ram
Technical Expert
Monitoring Committee

Report on compliance of order dated 17.12.2019 of the Hon'ble National Green Tribunal in OA no. 596 of 2019 in the matter of Vikram Ahuja V/s State of Punjab and others.

The Hon'ble National Green Tribunal vide its order dated 17.12.2019 in OA no. 596 of 2019 in the matter of Vikram Ahuja V/s State of Punjab and others has passed certain orders along with following directions to the Monitoring Committee.

We also request the monitoring committee headed by Justice Jasbir Singh to look into the matter.

Accordingly, the Monitoring Committee made its plan to visit Fazilka area w.r.t points as mentioned in the petition filed by Vikram Ahuja in the Hon'ble NGT on 6.1.2020 and 7.1.2020 and to hold meeting with the District level officers including Deputy Commissioner of the concerned district to review the status on the issue as under.

1.0 Visit to the drainage system carrying seepage/sludge and treated/untreated sewage of towns falling in the jurisdiction of district Fazilka, Ferozepur, Faridkot, Moga and Sri Muktsar Sahib and further culminating at Fazilka area in compliance to the order dated 596/2019 in the matter of Vikram Ahuja V/s State of Punjab and others by the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others on 6.1.2020 and 7.1.2020.

The following were present during the visit to the area :-

a) Members of the Monitoring Committee

Sr. No.	Name & Designation of the officer in the department	Designation in the Monitoring Committee
1.	Justice Jasbir Singh, former Judge, Punjab & Haryana High Court	Chairman
2.	Sh. SC Agrawal, IAS, former Chief Secretary, Punjab	Member
3.	Sant Balbir Singh Seechewal	Member
4.	Babu Ram, Former Member Secretary, Punjab Pollution Control Board	Technical Expert, Monitoring Committee

b) Officers of Punjab Pollution Control Board

1. Sh. Harwinder Singh, SEE, ZO, BTI
2. Sh. Surjit Singh Dhaliwal, EE, RO, Faridkot.
3. Sh. Rohit Singla, AEE, RO, Faridkot.
4. Sh. Ravi Pal, AEE, RO, Bathinda.

Pal

c) Officer of Department of Water Resources
Sh. Pawan Kumar Sharma, Executive Engineer

d) Officer of Department of Water Supply & Sewerage Board
Sh. Harwinder Singh, Chief Engineer

e) Officer of Department of Soil and Water conservation

Sh. Hemant Jasuja, Sub Divisional Soil and Water conservator officer

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f) Officer of Department of Rural Development and Panchayat

Sh. Ranjit Singh, DDPO, Fazilka

1.1 Visit to the area on 6.1.2020 and 7.1.2020

The monitoring committee constituted by the Hon'ble National Green tribunal in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others alongwith officers of the other departments visited the drainage system of Fazilka and its adjoining area in compliance to order dated 17.12.2019 in OA no. 596 of 2019 in the matter of Vikram Ahuja V/s State of Punjab and others on 6.1.2020 and 7.1 2020. During visit, the Executive Engineer, Department of water Resources (drainage) apprised the committee about the drainage network of the area as under:

- Drainage network of Jalalabad area (Jalalabad main drain, Jalalabad Mauzam drain and Sutlej Creek)
- Drainage network of Fazilka area having Fazilka drain, Mauzam DCB (for defence purposes), Sabuana drain, Sabuana distributory (for defence purposes) and old Fazilka drain
- Merging point of Sabuana drain, Ditch channel and Abulkhurana outfall drain

During visit to the area, the Monitoring Committee visited the following drains:

1. Old Fazilka drain
2. Sabuana drain
3. Ditch Channel
4. Accumulated mixed water in the form of pond.

The residents of nearby villages and Sh. Vikram Ahuja informed that Seepage and wastewater of all the drains of Fazilka area are collected in this big pond where the mixed water is accumulated and has become the source of contamination of groundwater and less yield of crops.

In order to assess the quality of mixed water accumulated in the form of pond, the Monitoring Committee collected the water samples on 6.1.2020 from the following drains.

1. Old Fazilka drain near Village Jhanger
2. Pond (Stagnated Water) near Beriwala

Further, in order to assess the water quality of groundwater of affected villages as mentioned in OA no. 596/2019 in order dated 17.12.2019, in the matter of Vikram Ahuja V/s State of Punjab and others, the Monitoring Committee collected the groundwater samples on 7.1.2020 from the following points.

1. From the handpump having depth 35 feet installed in the house of Sh. Satpal s/o Sh. Hira Ram, Village Gharumi.

2. From the handpump having depth 32 feet installed outside house of Sh. Nanak Chand s/o Sh. Chamba Ram, Village Gharumi.
3. From the handpump having depth 30 feet installed in the house of Sh. Lachhman Dass s/o Sh. Bala Ram, Village Beriwala.
4. From the handpump having depth 35 feet installed in the house of Sh. Darshan s/o Sh. Diwan, Village Qadar Baksh.
5. From the handpump having depth 40 feet installed near Govt. Primary School, Village Mumbeke.
6. From the handpump having depth 40 feet installed in the house of Sh. Kala Singh s/o Sh. Jalla Singh, Village Asafwala.

These drain samples and ground water samples have been sent to PPCB, Lab, Patiala for analysis of various parameters. The analysis results are awaited. The report will be concluded after the receipt of the analysis results.

2.0 Meeting with the District level Officers & District Level Special Task Force of District's Fazilka, Ferozepur, Faridkot, Moga and Sri Muktsar Sahib on 07.01.2020 in the committee room of Deputy Commissioner complex, Fazilka by the Monitoring Committee constituted by the Hon'ble National Green Tribunal in OA no. 916 of 2018.

The list of the participants is as per Annexure – 1.

The Chairman of the Monitoring Committee apprised the District Level officers about the important directions given by the Hon'ble NGT in its order dated 6.12.2019 (uploaded on 12.12.2019) in OA no. 916 of 2018 in the matter of Sobha Singh and others V/s State of Punjab and others and emphasized that the directions of the Tribunal in OA no. 673 of 2018 vide order dated 6.12.2019 is also applicable in river Sutlej particularly w.r.t adherence to the timelines to ensure atleast insitu remediation as an interim arrangement till 31.3.2020 failing which compensation will be payable from 1.4.2020 by the State which may be recovered from the concerned erring polluters/officers and ensuring full compliance of the action plans by 31.3.2021 failing which compensation will be payable in terms of said order.

Further, the chairman of the Monitoring Committee also informed that the Hon'ble tribunal in para number 15 of its order dated 6.12.2019 has issued the following directions.

(i) *100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 atleast to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e.*

Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP.

(ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

Therefore, the Chairman of the Monitoring Committee directed that all the concerned officers to complete the works relating to control of pollution in river sutlej and Beas within the time schedule as mentioned in order dated 6.12.2019 in OA no. 673 of 2018 and OA no. 916 of 2018.

Thereafter, the officers of the concerned department submitted the status report w.r.t steps taken/to be taken to tackle the pollution problem of Fazilka area as under:

2.1 Punjab Pollution Control Board

It was apprised in the meeting that in OA no. 596 of 2019 in the matter of Vikram Ahuja V/s State of Punjab and others, the petitioner has raised the issue w.r.t drains carrying sewage of towns and villages of district Fazilka and other nearby districts of Ferozepur, Sri Muktsar Sahib, Faridkot and Moga are discharged into drains flowing into Fazilka area where these drains culminate at Indo-Pakistan and due to blocking of flow of these drains, it has resulted into accumulation of polluted water in large area of district Fazilka at the border and seeping into underground water thereby causing underground water pollution and relating to environment damage to human health and agriculture.

It was further informed as under:

In Fazilka and other nearby Districts Ferozepur, Faridkot, Moga and Sri Muktsar Sahib, as mentioned in the OA no. 596/2019 in the matter of Vikram Ahuja V/s State of Punjab & Others, 26 Urban Local Bodies (ULB's) and about 200 villages have their discharge into drainage network of river Sutlej.

Out of these 26 ULB's, the status of STPs is as under:

- ✓ In 16 towns, STP's have been commissioned / under construction / stabilization.
- ✓ 9 town having no sewerage system / STP.
- ✓ 1 town has no land for STP.
- ✓ No industry discharges its untreated / treated effluent into any drain leading to river Sutlej.

It was further informed by him that in order to co-relate the water quality of ground water samples with the water quality of drains, there is need to get the expert opinion of any reputed agency.

2.2 Punjab Water Supply & Sewerage Board

The representative of Punjab Water Supply & Sewerage Board informed as under:

- 8 STP's for 7 towns (Abohar, Makhu, Zira, Talwandi Bhai, Moga, Dharmkot and Malout:2 STPs) having total installed capacity 103 MLD are being maintained by the PWSSB and are functioning well.
- For utilization of treated sewage of STP Malout (Bhagwanpura) of capacity 3 MLD, irrigation system has been installed. Desiliting of WSP ponds done in the month of December, 2019 and it is giving better results.
- 3 STPs for 3 towns (Ferozepur: 18 MLD, Jaito: 6 MLD and Gidderbaha: 7 MLD) are at completion stage and likely to be stabilized by 31.3.2020.
- 2 STPs for Kotkapura (8 MLD and 6 MLD) shall be completed by 31.7.2020.
- 2 STPs for Guruharsahai (4 MLD and 1 MLD) shall be completed by 31.8.2020.
- For 1 STP for Faridkot (14 MLD), land acquisition processes have been completed and construction of the same shall be completed within 1 year.
- For 5 towns (Arniwal, Mallaanwala, Mudki, Mamdot and Nihal Singh Wala), DPR have been prepared but funds are yet to be released.
- For 4 towns (Badhni Kalan, Kot Ise Khan, Fatehgarh Panchtoor and Bariwala), funds are yet to be tied up.

It was further informed by the Executive Officer, Municipal Council, Fazilka that de-silting of the pond of WSP has been completed recently and now the STP is functioning properly. Further, STP Fazilka shall enhanced to 13 MLD capacity by adopting new technology for which Rs. 13 crore shall be spent.

2.2.1 Department of Water Supply and Sanitation

It was apprised that STPs for Jalalabad, Bhaga purana and Shri Muktsar Sahib are being operated and maintained by Department of Water Supply and Sanitation.

2.3 Department of Water Resources (Drainage)

The Executive Engineer, Department of Water Resources (Drainage) apprised as under:

- In drainage network of Jalalabad area, treated sewage of Jalalabad STP is discharged into Jalalabad main drain further leading to Jalalabad Muzam drain.
- With regard to drainage network of Fazilka area, it was informed that Muzam-DCB drain and Sabuana distributaries have been constructed for defense

purposes. Fazilka drain has its flow towards pond where large quantity of water has been accumulated and is stagnating.

- The discharge of STP Fazilka is towards Fazilka drain near village Kabulshah Hithar, which further leads to large pond.
- The maximum discharge of Sabuana drain upstream of RD 29430 is 910 cusec, Abul Khurana out fall at RD 29430 is 915 cusec and the downstream of Sabuana drain, the discharge is 422 cusec and Ditch channel has discharge of 1403 cusec.

2.4 Department of Soil and Water Conservation

It was apprised as under:

- In 5 towns, 6 STPs (Malout-1, Muktsar Sahib-1, Muktsar Sahib-2, Dharamkot, Jalalabad, Fazilka) having total discharge of 39 MLD to cater 1395 hectare land, irrigation schemes have been commissioned.
- In 8 towns for 8 STPs (Moga, Bagha Purana, Abohar, Muktsar Sahib-3, Malout-2, Talwandi Bhai, Ferozpur and Zira), having total discharge of 99.5 MLD, irrigation projects have been prepared and funds are tied up.
- In 10 towns for 12 STPs (Guru Har Sahai, Guru Har Sahai, Jaito, Kotkpura, Kotkpura, Faridkot, Gidderbaha, Malout, Arniwala, Nihal Singh Wala, Makhu and Moga) having total discharge of 77 MLD, funds have not been tied up.

However, the department has not given details about installation/laying of irrigation schemes for 3 towns.

2.5 Department of Agriculture

Chief Agriculture Officer, Fazilka claimed that as per the record, yield of crop has not been reduced in the last 2 years in the villages as mentioned in the petition.

2.6 View points of Deputy Commissioners.

The Deputy Commissioner's Faridkot, Ferozepur, Moga & Sri Muktsar Sahib apprised that they are regularly holding monthly meeting with the officers of various departments, wherein activities such as status of installation of STP's, disposal of treated / untreated sewage, monitoring of effluent treatment plants by the industries are discussed and the officers are requested to accelerate all the activities to complete the activities relating to their department within the time schedule.

After detailed deliberation, the Chairman of the Monitoring Committee directed as under:

1. PPCB shall ensure that no industry is discharging its treated/ untreated industrial effluent into drain / nallah / river.

2. PPCB shall engage an expert to assess the water quality data of ground water and drains for its co relation with each others. The Sub Committee constituted by the Deputy commissioner Fazilka shall submit its conclusive report within 2 months.

3. PPCB shall monitor the performance of existing STPs on monthly basis and action against the defaulting STPs may be taken under provisions of Water Act, 1974.

4. Department of Water Supply and Sewage Board shall install and commission STPs for the towns as under:

   - STPs for 3 towns namely Ferozpur, Jaito and Gidderbaha shall be installed by 31.3.2020.
   - 2 STPs for Kotkapura shall be installed by 31.7.2020
   - 2 STPs for Guruharsahai shall be installed by 31.8.2020.
   - 1 STP for Faridkot, where land acquisition process has been completed, shall be commissioned by 31.12.2020.
   - 5 STPs for 5 towns (Arniwal, Mallaanwala, Mudki, Mamdot and Nihal Singh Wala) for which funds are yet to be released shall be installed by 31.12.2020
   - 5 STPs for 4 towns (Badhni Kalan, Kot Ise Khan, Fatehgarh Panchtoor and Bariwala) for which funds are yet to be tied up, shall be completed by 31.12.2020

5. For the release of funds for the installation of STP's, where the funds have not been tied up so far, the concerned Deputy Commissioner's shall take up the matter with State Govt.

6. The Municipal Council, Fazilka will construct a storage tank after WSP within 2 months from where treated wastewater will be lifted for supplying to farmers so that the settled sludge is not carried away with the treated effluent. PPCB will collect the effluent samples after 2 months in the presence of farmers and Municipal Council, Fazilka to check the adequacy of STP's.

7. As per the direction of the Hon'ble NGT, in-situ bio-remediation technology be adopted immediately where no sewerage system has been laid so far to have its connectivity with STP.

8. In order to reduce the inflow of the effluent in the pond, the department of water resources shall examine the issue with regard to closing of regulator installed at Sabuana drain so as to divert the effluent towards the creek leading to river Sutlej.

9. The Department of Water Resources in consultation with Deputy Commissioner, Fazilka shall maintain regular flow in Fazilka distributary and Kerian minor to ensure availability of water for irrigation for whole of the year till the completion and commissioning of STP's of all the towns of the Districts.

10. The Chief Agriculture Officer, Fazilka shall collect the data with regard to yield of crops in the affected area over the years and details of the villages from where the data was collected and submit the same to the Deputy Commissioner, Fazilka as well as to the Monitoring Committee.

11. Deputy Commissioner, Fazilka in coordination with concerned Municipal Councils and Punjab Water Supply Sewerage Board shall sort out the issues with regard to STPs of Shri Muktsar Sahib and Jalalabad towns.

12. The Principal Secretary, Department of Water Resources, Punjab, may take up the matter with the Ministry of Water Resources, Government of India, New Delhi to take up the matter with the concerned Ministry of Government of Pakistan through Ministry of External Affairs, Govt. of India to open the Fazilka drain, which is presently has been closed at the borderline of the countries, to make free flow in the river Sutlej so as to avoid stagnation and seepage in the Fazilka area. A provision in this regard was inserted in para (4) of Article-IV of "Indus Water Treaty, 1960 which reads as under:

Para (4) of article – IV of "the Indus Water Treaty, 1960 reads as under:-

"Pakistan shall maintain in good order its portions of the drainages mentioned below with capacities not less than the capacities as on the effective Date:-

i. Hudiara Drain
ii. KasurNala
iii. Salimshah jDrain
iv. Fazilka Drain."

Dr. Babu Ram **Sant Balbir Singh Seechewal** **S.C. Agrawal**

Justice Jasbir Singh,
Former Judge of Punjab
and Haryana High Court,