

**2nd 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 16.07.2019**

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

29th October, 2019

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2nd 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 16.7.2019.

1.0 Background

The Hon'ble National Green Tribunal after considering the report of the monitoring committee in OA No. 916 of 2018 in the matter of Sobha Singh & Others V/s State of Punjab, submitted in the month of June, 2019, has passed the detailed order dated 16.7.2019, which is annexed as per **Annexure-1**. The main observations of the Hon'ble Tribunal mentioned at para no.14, 16 and 17 are reproduced as under:

Para No. 14

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.

Para No. 16

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.

Para No. 17

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.

List for further consideration on 06.12.2019.

2.0 Compliance of order of Hon'ble Tribunal

In compliance to the order of the Hon'ble Tribunal, the monitoring committee has made field visits, held meetings with State Level Officers, made discussion with the concerned departments/stake holders and collected data w.r.t water quality of river Sutlej, Beas and Holy Bein, ultimately meeting at Harike lake, District Ferozepur, performance of existing sewage treatment plants (STPs), status of construction of new STPs, status of remaining STPs where construction work has not been started so far, enhancement of capacity of STPs, gap in sewage treatment, utilization of treated sewage for irrigation, status of irrigation schemes as on 30.9.2019 to utilize treated sewage, treatment of sewage/sullage from rural areas (villages). Besides, the committee also visited the pollution sources and industries and made its recommendations, which have been sent to the concerned Departments and Punjab Pollution Control Board for necessary action.

Based on the fields visits made by the committee, data collected on above said activities and detailed deliberations made with the concerned departments/stakeholders, the Monitoring Committee has prepared its report and the same is submitted as under:

2.1 Activities of the Monitoring Committee

In order to monitor the various activities mentioned in the Action Plan to control pollution in river Sutlej and Beas, the Monitoring Committee held 4 meetings (29.5.2019, 20.6.2019, 23.7.2019 and 20.8.2019), wherein the activities w.r.t performance of existing STPs, installation of new STPs, inspection of industries, water quality of river Sutlej and Beas were discussed and directions on the various issues were given accordingly. The Monitoring Committee has also made fields visits to the industries and sewage treatment plants located in catchment area of River Sutlej and Beas and the status is submitted as under:

2.2 3rd Meeting of the Monitoring Committee held with the officers of the concerned departments of State of Punjab on 29.5.2019.

In the meeting held on 29.5.2019 with the officers of the concerned departments of State of Punjab, the following issues were deliberated.

2.2.1 Monitoring the functioning of existing STPs

As per the data supplied by Punjab Pollution Control Board, out of total 51 STPs on river Sutlej and 16 STPs on river Beas, 40 STPs were monitored, out of which only 13 STPs were found compliant w.r.t achievement of standards. Therefore, it was directed that department of Local Government shall prepare operation and maintenance manual within 30 days.

2.2.2 Monitoring of functioning of Common Effluent treatment Plants (CETPs)

During the meeting, it was observed that CETP, leather complex, Jalandhar was not complying with the norms. CETP at Ludhiana for electroplating industries was not receiving effluent as per the capacity of industries.

Therefore, Punjab Pollution Control Board was directed to take action against the CETP leather complex for non compliance, get install GPS based IT system to monitor the quantity of the electroplating effluent lifted and tankers deployed for collecting the effluent.

2.2.3 Monitoring of ETP of the industries

The monitoring Committee observed that there was high degree of non compliance w.r.t. operation of ETPs by the industries, therefore PPCB was directed to take strict action against the non complying industries. Further, some %age of industries must be checked by Chairman, Chief Environmental Engineer and Senior Environmental Engineer of Punjab Pollution Control Board.

2.2.4 Setting up of new/upgradation of STPs

Considering the current status of installation of new STPs and upgradation status of other STPs, the Monitoring Committee asked the department of Local Government to install new STPs and upgrade the existing STPs by 31.3.2021.

2.2.5 Setting of the ETPs/biogas plants for dairy waste

In Ludhiana, there are two dairy complex namely Tajpur Road dairy complex and Haibowal Dairy complex. The discharge of effluent of these dairies are 5 MLD and 10 MLD, respectively. Therefore, there is need to install ETPs by these dairies. In the earlier discussion, it was informed by Municipal Corporation Ludhiana that these dairies shall be shifted to suitable locations. Therefore, the Monitoring Committee directed that Municipal Corporation, Ludhiana shall finalize as to whether the dairies are to be shifted or to install ETPs/biogas plant at the existing locations.

2.2.6 Reconciliation of Wastewater and industrial effluent of Ludhiana

It was observed that 16 major sewage disposal points of MC, Ludhiana are directly discharging their wastewater into Budha Nallah. Effluent from Tajpur dairies and textile industries are increasing the discharge of effluent to 112 MLD into STP, Tajpur Road against installed capacity of 48 MLD.

Therefore, the Committee directed MC, Ludhiana to monitor the discharge from sewerage pipe carrying effluent from Tajpur road and focal point industries and GIS

mapping of all the industries along with their conveyance system, minor and major outlets directly discharging their wastewater into Budha Nallah.

2.2.7 Release of fresh water into Budha Nallah and Holy Bein

It was directed that the Department of Local Government shall follow up the matter for release of funds from State Government to release fresh water into Budha Nallah and Holy Bein to have sufficient dilution.

2.2.8 Reuse of treated wastewater for irrigation

The matter regarding reuse of treated sewage for irrigation was discussed in detailed and the following decisions/recommendations were made by the Committee.

- 1) Department of Soil & water conservation shall check the feasibility for using the treated sewage of STP Jamalpur, Bhattian and Balloke for irrigation.
- 2) Department of Soil & Water Conservation shall check the feasibility of revival of lower Budha Nallah for reusing the treated wastewater for irrigation.

2.2.9 Preventing dumping of solid waste into Budha Nallah

The Monitoring Committee informed to the officers of Municipal Corporation, Ludhiana that lot of solid waste has been dumped in the Budha Nallah at its various stretches. In this regard, Municipal Corporation, Ludhiana informed that it has undertaken 500m stretch of Budha Nallah to convert it into modern stretch by taking all necessary measures such as installation of CCTV cameras and plantation of trees on both sides to prevent dumping of solid waste.

2.2.10 Treatment facility in villages

In order to control pollution in drains/Nallahs further leading to river Sutlej & Beas, there is need to treat sewage/sullage of the villages. It was informed by the Department of Rural Development and Panchayat that the villages have already been identified. Sewage of these villages shall be treated in phased manner. The Department of Rural Development & Panchayat was directed by the Monitoring Committee to submit the progress timely.

2.2.11 Shifting of small/medium scale scattered dyeing industries

As per report of Punjab Pollution Control Board, 45 small and medium scale dyeing industries having total discharge of 10 MLD, located in non designated areas, are to be shifted to designated area for their further connectivity to the upcoming CETPs for dyeing industries of Ludhiana.

The Monitoring Committee directed that after mapping all the industries, comprehensive plan be prepared by Municipal Corporation, Ludhiana.

2.2.12 Organization of health check up camps

No health check up camps has been started so far. Therefore, the Department of Health and Family Welfare was directed to organize health check up camps in the catchment area of river Sutlej and Beas.

2.2.13 Direct discharge of various outlets into drains in Jalandhar

The Monitoring Committee observed that there is need to install separate CETP for the industries of Focal Point, Jalandhar. The Monitoring Committee directed PSIEC to ensure that no industry discharges its trade effluent into sewerage system, which has been laid for domestic sewage of industrial area, Jalandhar.

2.3 4th Meeting of the Monitoring Committee held with the officers of the concerned departments of State of Punjab on 20.6.2019.

In the said meeting, the following issues were discussed

2.3.1 Monitoring of water quality of rivers

Presently, Punjab Pollution Control Board is monitoring the water quality of river Sutlej & Beas manually and the pollutants are analysed in the laboratory. The Monitoring Committee directed Punjab Pollution Control Board to engage some agencies/education institutions to analyze the water quality data and to develop a model for correlating the water quality of river Sutlej & Beas with various sources of pollution.

2.3.2 Functioning of existing Sewage Treatment Plants (STPs)

In order to operate the existing STPs effectively, there is need to prepare operation maintenance manual. The Monitoring Committee directed PWSSB to finalize the operation and maintenance of STPs manual in next 2 weeks and Punjab Pollution Control Board shall finalize the action against defaulting STPs.

2.3.3 Monitoring the functioning of CETPs

By The monitoring Committee directed Punjab Pollution Control Board to take legal action against the leather complex, Jalandhar and CETP electroplating, Malerkotla because these CETPs have been found non compliant w.r.t. various parameters, which are not within the permissible limits.

It was further directed that PPCB shall carry out environment audit of CETP electroplating, Ludhiana and submit report in this regard.

PPCB was also asked to set up GPS based IT system for monitoring the quantity of effluent lifted and movement of tankers deployed for collecting the effluent from electroplating industries.

2.3.4 Installation of Online Continuous Effluent Monitoring Systems (OCEMS) by industries

The Monitoring Committee directed Punjab Pollution Control Board to get install OCEMS from the industries which have discharge more than 50 KLD and these industries should install OCEMS by 31.7.2019.

2.3.5 Installation of new STPs/upgradation of STPs

It was discussed that new STPs / upgradation of STPs may be installed/made by 31.3.2021.

2.3.6 Installation of new CETPs/upgradation of CETPs

The Monitoring Committee directed Punjab Pollution Control Board (PPCB) that 15 MLD CETP for Bahadurke road textile dyeing industries of Ludhiana should be made operational by 30.6.2019, failing which the Board should take action.

The Committee further directed Punjab Pollution Control Board to put in place a legally binding system for successful operation and management of proposed CETPs.

The Monitoring Committee further directed PPCB to take initiative to get install 0.15 MLD CETP for electroplating industries at Jalandhar. Also, CETP for textile dyeing industries of industrial area-A, Ludhiana may be got installed in 2-2.5 acres of land pertaining to department of industries.

2.3.7 Reuse of treated wastewater for irrigation and other purposes

Department of Soil and Water Conservation reported that feasibility study for using the treated sewage of Ludhiana city through STPs Jamalpur, Bhattian and Balloke for irrigation has been initiated and is likely to be completed within 3 months.

2.3.8 Preventing dumping of solid waste into Budha Nallah

It was reported in the meeting that Municipal Corporation, Ludhiana has converted 500m stretch of Budha Nallah into modern stretch by installing CCTV cameras. Patrolling teams have been deputed to prevent the dumping of solid waste into Budha Nallah.

2.3.9 Setting up of treatment facilities in villages

Department of Rural Development & Panchayats reported in the meeting that under Phase-1, 167 villages have been covered for preparation of Detailed Project Report (DPR). A budget of Rs. 50 crores, sanctioned by Govt. of Punjab, is yet to be released.

2.3.10 Installation of OCEMS and CCTV cameras for STPs

Municipal Corporation, Ludhiana reported that OCEMS in 5 STPs are likely to be commissioned by 14.10.2019 and for 3 STPs at Mukatsar and 1 STP at Anandpur Sahib, OCEMS shall be installed by 15.9.2019 and 31.12.2019, respectively.

2.3.11 Organizing health check up camps

The monitoring Committee desired that Department of Health and Family Welfare shall coordinate with PGI, Chandigarh for carrying out the epidemiological studies in the catchment area of rivers.

2.3.12 Violation by the industries

The Monitoring Committee directed PPCB to ensure zero tolerance towards violation and take strict action against the defaulting industrial units. PPCB was further directed that their Regional Offices shall ensure that there are no unauthorized pipelines for discharging the effluent in the ground or other nearby sources.

2.3.13 Regarding Management of Solid Waste:

The Monitoring Committee directed PPCB to expedite GIS mapping of 150 most vulnerable points of waste collection along the important highways and other places.

2.4. 5th meeting of Monitoring Committee held with the officers of the concerned departments of State of Punjab on 23/7/2019:

2.4.1. Monitoring of water quality of rivers:

PPCB was directed that all the 11 Real Time Water Quality Monitoring Stations (RTWQMS) shall be made operational by 1/12/2019.

2.4.2. Monitoring of functioning of STPs in the catchment area:

It was informed in the meeting that %age of non compliance of STPs during the month June, 2019 was 55%. The committee observed that non compliance of STPs is very high. The reasons for non compliance of STPs were mentioned as inadequate chlorination (10 STPs), require desilting of ponds (6 STPs), Final polishing Units of STPs (FPU) filled with sludge (4 STPs), component break down (6 STPs) and lack of O&M (8 STPs).

PPCB was directed to make concerted efforts to bring down the noncompliance to 15% during the next quarter. It was further directed to continue with 100% inspection of all the STPs.

PPCB was directed to decide the action against all the non compliant STPs within 45 days. Penalties be imposed on the operator of STPs. Disciplinary action be taken against the supervisory staff for continuous failure of STPs. Further, for e-surveillance, all the STPs shall install OCEMS / CCTVs by 30/11/2019 for effective monitoring, failing which environment compensation be imposed on the concerned departments / agencies.

With regard to sealing of bye-pass system of STPs, PPCB shall submit compliance report that bye-pass system of all the STPs have been sealed.

2.4.3. Monitoring of functioning of CETPs:

With regard to CETP, Leather Complex, Jalandhar, the monitoring committee directed PPCB to prepare standard operating procedure (SOP) for officers at different levels for ensuring that CETPs are functioning effectively. Further, PPCB shall take action against the non compliant CETP, Leather Complex, Jalandhar including imposition of environment compensation and report be submitted.

2.4.4 Monitoring of functioning of ETPs installed by the industries:

The monitoring committee observed that %age of inspection of industries has been reduced and no inspection has been carried out at the level of Chief Environmental Engineer and Chairman, PPCB. Therefore, PPCB was directed to ensure the compliance. Action against officers of PPCB shall be taken by the Deptt. of Environment in case PPCB fails to comply with the decisions of the committee.

2.4.5 Installation of OCEMS by the industries:

The monitoring committee observed that progress w.r.t. installation of OCEMS by all the 115 industries which have discharge more than 50 KLD was very poor. Therefore, the committee directed PPCB to fix the responsibility of Regional Officers for not making the compliance of the orders and also levy environment compensation for non compliance.

2.4.6 Setting up of the new / upgradation of STPs:

The monitoring committee observed that progress for setting up of new / upgradation of STPs was poor and the Deptt. of Local Govt. was directed to expedite the matter so that new/upgradation to be made in STPs should be completed by 31.3.2021.

2.4.7 Setting up of new CETPs:

The monitoring committee noted that 15 MLD CETP was to be commissioned by 30/6/2019, but the same has not been commissioned so far. Therefore, committee observed that lack of commissioning of CETPs is further holding the progress in ensuring abatement of pollution in Budha Nallah.

The monitoring committee further directed PPCB to ensure to operationalize the 40 MLD and 50 MLD CETP for cluster of dyeing industries of Ludhiana as per the timeline mentioned in the Action Plan, failing which action including environmental compensation shall be taken by PPCB.

With regard to stoppage of work of setting up of 0.15 MLD CETP for electroplating industries of Jalandhar area, PPCB was directed to get the assistance of the District Administration in going ahead the projects.

2.4.8. Installation of ETP / Bio-gas plant for dairy waste:

The monitoring committee was informed that Municipal Corporation, Ludhiana has decided not to shift the Tajpur dairies. Therefore, the committee directed MC, Jalandhar and MC, Ludhiana to provide firm timelines for setting up of ETPs / bio-gas plants for management of dairy waste of Ludhiana.

2.4.9 Release of 200 cusec water in Budha Nallah:

It was informed that PPCB and MC, Ludhiana have jointly agreed to fund the proposal of releasing 200 cusec water into Budha Nallah amounting to Rs. 5.77 crores on 50:50 sharing basis.

2.5. 6th meeting of Monitoring Committee held with the officers of concerned Departments of State of Punjab on 20.08.2019:

2.5.1. Monitoring of water quality of rivers:

The monitoring committee was informed that Real Time Water Quality Monitoring System (RTWQMS) shall be installed by PPCB by 15/12/2019. PPCB was directed to intimate the various locations on Budha Nallah for installation of said monitoring systems.

2.5.2. 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 bypass 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.

2.5.3. 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:

- 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.

2.5.4. 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 in consonance 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.

2.5.5. New / upgradation / rehabilitation of STPs:

The Monitoring Committee observed that the progress of setting up of 3 new STPs 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 Deptt. 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.

2.5.6. 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.

2.5.7. 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.

2.5.8. 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.

2.5.9. 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.

2.5.10. Progress regarding organization of Health Check Up Camps:

Director, Department of Health was directed to take up the matter with the Government to involve PGI Chandigarh for carrying out epidemiological studies to establish correlation with diseases caused due to Water Pollution.

3.0. Recommendations made by the Monitoring Committee during its visit to the industries of Ludhiana Area on 16.08.2019

The Monitoring Committee during its visit to Ludhiana area, inspected 8 industries and prepared the detailed report, which is annexed as per **Annexure-2**. The report was sent to Chairman Punjab Pollution Control Board vide this office letter no.CEC/2019/414 dated 12.9.2019 to take necessary action on the recommendations of the Monitoring Committee.

The recommendations made by the Committee w.r.t. each industry are mentioned as under:

3.1. M/s Hero Ecotech Limited, Phase-VIII, Mangli, Focal Point, Ludhiana

Recommendations:

- 1) Physico-chemical treatment is imparted to the effluent generated from its process and the treated effluent is taken into RO system followed by multi-effect evaporator.
- 2) Since the industry has adopted zero liquid discharge technology, as such, it may not be allowed to discharge its any effluent even generated from MEE into sewerage system. The domestic effluent after treatment may be utilized for plantation within its premises.
- 3) Chairman PPCB shall depute a team of officers of PPCB in 3rd week of Sep, 2019 to carryout detailed study of the processes of the industry, type and concentration of coagulants / chemicals used for physico-chemical treatment provided by the industry before carrying the primary treated effluent to the RO system for its further treatment. The team shall also verify the quantity of sludge generated from various sources i.e physico-chemical treatment, any other sludge generated within the processes of the industry and residue generated from MEE w.r.t concentration of various parameters in the untreated effluent, amount of coagulants/chemicals used for physico-chemical treatment and TSS removed in the system. Concentration of TDS in the influent, in sludge generated from physico-chemical treatment and in the primary treated effluent may also be analysed as there is reduction in the value of TDS, zinc and iron at inlet to settling tank as compared to the values of these parameters at the collection cum dosing tank.
- 4) The quantity of sludge generated and quantity of sludge sent to TSDF, Nimbua may also be verified.

3.2. M/s Hero Cycle (Auto Rim Division), Chandigarh Road, Focal Point, Phase-VIII, Ludhiana.

Recommendations:

- 1) Chairman PPCB shall depute a team of officers of PPCB in 3rd week of Sep, 2019 to carryout detailed study of the processes of the industry, type and concentration of coagulants/chemicals being used for physico-chemical treatment provided by the industry before carrying the primary treated effluent to the RO system for its further treatment. The team shall also verify the quantity of sludge generated from various sources i.e physico-chemical treatment, any other sludge generated within the processes of the industry and residue generated from MEE w.r.t concentration of various parameters in the untreated effluent, amount of coagulants/chemicals used for physico-chemical treatment and TSS removed in the system. Concentration of TDS in the influent, in sludge generated from physico-chemical treatment and in the primary treated effluent may also be analysed.
- 2) The quantity of sludge generated and quantity of sludge sent to TSDF, Nimbua may also be verified.

3.3. M/s Megaline Enterprises, D-292, Phase-VIII, Focal Point, Ludhiana

Recommendations:

- 1) The Chairman of Punjab Pollution Control Board shall issue directions under the provisions of the Water Act, 1974 for its closure.
- 2) An environment compensation amounting to Rs. 30 lakh may be imposed upon the industry.
- 3) Chairman Punjab Pollution Control Board shall take disciplinary action against the concerned Environment Engineer and Assistant Environmental Engineer of the area for not reporting about the bye-pass arrangements made by the industry for the discharge of primary sludge directly into the sewerage system instead of passing through filter press and sending the same to TSDF Nimbuan.

3.4. M/s Neelam Dyeing & Printing House, D-327, Phase-8, Focal Point, Ludhiana

Observations:

The monitoring committee visited the industry on 16.8.2019 at around 12:50 hrs. By seeing the committee, the industry deliberately closed its door from inside and did not open the door inspite of knocking the door so many times. Sh. Vicky Bansal, Assistant Environmental Engineer contacted Sh. Gaurav Arora the owner of the industry telephonically twice and asked him to get open the door of the industry to

facilitate the committee to visit ETP of the industry. Text message was also sent to him but in vain.

Therefore, in spite of every effort made by the committee, the representative of the industry did not open the door of the industry. These facts indicate that the industry deliberately closed the door of the industry just to avoid the entry of the monitoring team within his premises and check the pollution control system, if provided by the industry.

Recommendations:

Monitoring committee recommends that Chairman Punjab Pollution Control Board shall issue directions for its closure under the provisions of the Water Act, 1974 for its closure immediately.

3.5. M/s Aggarwal Scientific Dyers, D-324, phase-8, Focal Point, Ludhiana

Observations:

1. Some components of effluent treatment plant were found in defunct stage which indicate that the industry does not operate its effluent treatment plant even during normal days of its operation and in case ETP is operated, it may be giving ineffective treatment to the effluent.
2. The analysis results of parameters namely TSS, BOD, COD and Sulphide were found higher than the permissible limits as prescribed by the Punjab Pollution Control Board.

Recommendations:

- 1) The Chairman of Punjab Pollution Control Board shall issue directions under the provisions of the Water Act, 1974 for its closure.
- 2) An environment compensation amounting to Rs. 20 lakh may be imposed upon the industry.
- 3) Chairman Punjab Pollution Control Board shall take disciplinary action against the concerned Environment Engineer and Assistant Environmental Engineer of the area for not reporting about the defunct status of ETP of the industry and not taking any legal action against the industry under the provisions of the Water Act, 1974.

3.6. M/s JBR Technologies Pvt. Ltd., B-260-261, Phase-VIII, Focal Point, Ludhiana:

Observations:

1. The walls of the collection tank were found corroded, which may become the source of seepage of contaminated effluent.

2. The sludge generated from the tube settler was found spread in the sludge drying beds but no mechanism has been provided to cover the sludge during rainy days.
3. The sludge was being dried in sun, whereas, the sludge thickener and sludge dryer were not in operation.
4. As claimed by the representation of CETP, RO permeate and multi effect evaporator condensate are given to the nearby dyeing industries for its utilization into their processes.
5. The monitoring team checked the functioning of the GPS system and the location of 3 vehicles was checked and the drivers of these vehicles were contacted telephonically and out of these 3 vehicles, the driver of one of the vehicle intimated his location which was found in order.

Recommendations:

1. The CETP operator should provide impervious lining / rubber lining on the walls of the collection tank to protect these walls from corrosion and avoid seepage of toxic effluent.
2. The area of the sludge drying beds may be increased appropriately so as to dry it easily in sunny days. There should be a mechanism of protecting these sludge drying beds containing sludge during rainy days.
3. The sludge thickener and sludge dryer should be made operational at all the times to dry the sludge.
4. Chairman, Punjab Pollution Control Board shall depute a team of officers of Punjab Pollution Control Board to conduct detail study w.r.t quantity of chemicals used for treatment of the wastewater, removal of TSS in the treatment system, residue from MEE and the quantity of dried sludge generated and sent to the TSDF, Nimbuan. The team shall also prepare sludge balance statement and submit detailed report to the Board for appropriate action in the matter within one month under intimation to the monitoring committee.
5. The said team shall also verify the compliance of the observations of the monitoring committee which was earlier monitored by the committee in its earlier visit.
6. The industry shall make entire process area as leak-proof. Acid proof floor tiles with adequate slope to collect spillages, if any, into a collection pit, may be provided.
7. The industry shall provide proper personal protective equipment such as masks, safety gloves, goggles, safety shoes etc to the workers / labourer on the job.
8. The industry shall implement remediation measures of contaminated soil / ground water / sediments in case environment damage is occurred during

transportation, improper handling of the toxic wastewater, accidental spillage during storage, processing and treatment of the wastewater.

9. The industry shall provide piezometric wells all around the CETP for monitoring the quality of ground water.

3.7. M/s Avon Cycles Ltd., G. T. Road, Ludhiana:

Observations:

1. Though the industry has provided various components for treatment of effluent like physico-chemical treatment followed by filtration unit (ultra filtration, RO system, Nano filtration) and the reject is fed to the multi effect evaporator but these components have been provided at such a height, where it is difficult to check the functioning of these components. Therefore, the industry should make such arrangements so that these components may be easily and safely approachable to the visiting officers.
2. The industry has provided water meter on different streams and the readings of these water meters were noted during the visit but from these readings no conclusions can be drawn with respect to use of fresh water in different streams and the effluent generated from these streams and their physico-chemical treatment followed by filtration units and recycling of the permeate of the filtration units. Therefore, the industry should maintain daily water balance statement for the facilitation of the visiting officer.
3. The analysis results of the effluent samples collected from the drain leading to sewer indicate that the industry may be discharging its effluent into sewerage system whereas the industry is based on ZLD technology and it is not allowed to discharge its trade effluent into sewerage system.

Recommendations

1. The industry shall ensure that no trade effluent is discharged into drain or sewerage system. All the streams, carrying trade effluent, shall be treated through RO system followed by multi effect evaporator. RO permeate and condensate of MEE shall be reused in the processes of the industry. No effluent shall be discharged into sewerage system.
2. The hazardous sludge generated from physic-chemical treatment and MEE residue shall be sent to TSDF and a record in this regard shall be maintained by the industry.
3. Chairman, Punjab Pollution Control Board shall impose an environment composition of suitable amount on "polluter pays" principal as the industry, being large scale electroplating unit, has not been allowed to discharge its trade effluent into sewerage system.

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3.8. M/s Eveline International, Dhandhari Kalan, G. T. Road, Ludhiana:

Observations

- 1) The industry has installed Mechanical Vapour Re-compressor (MVR) but the same was not in operation during the visit.
- 2) The industry is maintaining low level of BOD: 70 mg/l at the inlet of ETP by diluting it with RO reject having very low values of BOD: 14 mg/l, whereas it should have been taken into MEE. The resultant value of TDS at the inlet of ETP has been found 2640 mg/l. Had the industry not mixed with RO reject with inlet streams, the values of the BOD and COD may be much more as compared to the present value of 70 and 240 mg/l. Thus, the industry has taken advantage of mixing these streams but has increased the value of TDS to 2640 mg/l. As per record of PPCB, the industry is mixing its RO reject system with untreated effluent to reduce the values of BOD and COD in the influent collected tank for the last more than one year, whereas, the industry should have installed Multi Effect Evaporator (MEE) to evaporate the RO reject. Now, it has installed MVR, a pilot project of 100 KLD as ZLD system. This system also requires multi effect evaporator for drying the MVR residue.
- 3) Punjab Pollution Control Board shall check its record as to whether it has allowed the industry to recycle its RO reject, whereas it is not advisable to recycle any stream such as RO reject containing high level TDS as 5220 mg/l.
- 4) The Punjab Pollution Control Board record has been checked and it has been observed that during the effluent sample collected by the Board on 10.12.2018, it has been reported that RO reject was being mixed with the inlet streams. This shows that the industry was required to install MEE for evaporation of RO reject.
- 5) Chairman, Punjab Pollution Control Board shall depute Environment protection squad to visit the industry surprisingly and the said team shall carry out comprehensive study with respect to all the parameters and all the components of ETP, UF and RO system, their treatment efficiency, water balance statement, sludge generation & its management and characteristics of final effluent discharged into sewerage system or onto land for plantation.

4.0 Recommendations made/directions given by the Monitoring Committee during its meeting on 01.08.2019 at Jalandhar with District Level officers of Districts Kapurthala and Jalandhar regarding control of pollution in Kala Singhian Drain and Holy Bein leading to river Sutlej:

The Monitoring Committee under the chairmanship of Justice Pritam Pal, former Judge, Punjab & Haryana High Court and now as Chairman of the Committee held its meeting with the District level officers of District Kapurthala and Jalandhar on 1.8.2019. The minutes of the meeting are annexed as per **Annexure-3**. The minutes of the meeting were sent to the concerned officers vide this office letter no. CEC/2019/321 dated

7.8.2019. The monitoring committee has given the following directions/made recommendations: -

4.1 Tapping the discharge of sewage into Sultanpur drain leading to Holy Bein.

It was apprised that the non-operational pumps shall be made operational by 31.08.2019, which shall also result into tapping the discharge of sewage and the same shall be taken into STP, Sultanpur Lodhi. As such, there shall be no discharge into Sultanpur drain leading to Holy Bein.

4.2 Operation of USAB reactors and de-sludging of the polishing tanks of STP, Kapurthala.

Chairman of the Monitoring Committee asked the officers of the PWSSB to finalize the DPR for upgradation of UASB Reactor and other components of STP Kapurthala within 15 days and call the tenders within next 07 days and complete and commission the same 31.03.2020. It was further directed that PWSSB shall ensure that the upgraded STP shall achieve the standards as directed by the Hon'ble National Green Tribunal in OA No. 1069/2018 in the matter of Nitin Shankar Deshpande V/s Union of India & Others.

4.3 Utilization of treated sewage for irrigation.

It was informed that presently, the treated sewage of STP Kapurthala is used for irrigation in 299 hectares of land of farmers of nearby villages. Baba Seechewal apprised that presently the pipeline carrying treated sewage is not properly operational due to its chocking.

The Monitoring Committee asked Department of Soil & Water Conservation to clean the pipeline by 31.08.2019 and ensure that it shall be made fully operational for all the times.

4.4 Improvement to be made in the chlorination system

It was informed that the chlorination to be imparted to bring down the F-coli parameter in the treated sewage has also been included in the plan for upgradation of STP. Therefore, chlorination system shall also be made operational simultaneously with the operation of upgraded STP.

Chairman of the Monitoring Committee asked the Deputy Commissioner, Kapurthala to coordinate the matter regarding upgradation of STP and shall ask Executive Officer Kapurthala to deposit the funds with the Sewerage Board so that upgradation work of STP may be completed well in time.

4.5 Installation of STP of capacity 3 MLD for treatment of sewage of Rawal & its colonies being carried through Bhulana Drain:

Chairman of the Monitoring Committee asked the Deputy Commissioner, Kapurthala to coordinate among the departments viz. Deptt of Housing & Urban Development, Deptt. of Rural Development & Panchayat & Deptt. of Water Supply & Sewerage Board and make arrangements to procure the balance funds amounting to Rs.4 Crores, so that STP of capacity 3 MLD for treatment of sewage of Rawal & its colonies, being carried through Bhulana Drain, may be installed within the time schedule.

4.6 Plugging of disposal of sewage/sullage of Village Kheda Dona, presently being discharged into Holy Bein.

Chairman Monitoring Committee asked Deputy Commissioner, Kapurthala to hold meeting with Punjab State Power Corporation Ltd (PSPCL) and Deptt. of Rural Development & Panchayat and ensure that the old transformer shall be replaced with new transformer so that disposal of sewage/sullage of Village Kheda Dona, presently being discharged into Holy Bein, may be diverted to the pond and further for irrigation

Deptt. of Rural Development & Panchayat assured that no sewage of the village Kheda Dona shall be discharged into Holy Bein. The said work shall be completed by 08.08.2019.

4.7 For installation of separate STP for treatment of sewage of Focal Point, Jalandhar

It was informed that for installation of separate STP for treatment of sewage of focal point, Jalandhar, DPR is under preparation. Chairman of the Monitoring Committee directed the concerned Executive Engineer of PSIEC to submit complete timelines including tendering, installation and commissioning of STP and ensure that the said STP shall also be completed within the time schedule

4.8 Outlets maintained by PSIEC near Sports and Surgical Good Complex, Jalandhar.

Ad Regarding closing of the outlets, carrying domestic effluents from the Sports & Surgical Goods Complex; Dry Leather Complex & Leather Complex, Jalandhar into Kala Singhian Drain, it was informed that these outlets have been closed. However, Punjab Pollution Control Board claimed that these outlets have been temporarily closed and the discharge is still being maintained into Kala Singhian Drain as observed during the visit made on 30.07.2019.

Chairman of the Monitoring Committee directed that these outlets should be closed permanently by PSIEC and Punjab Pollution Control Board shall verify the same and ensure that no such outlet is maintained into Kala Singhian drain after 31.08.2019. Regarding operation of storm water drain, it was directed that these may be made operational only in heavy rains or in exigency and that only in the presence of Officers of Punjab Pollution Control Board.

4.9 Closing of outlets of Kalia Colony, Shaheed Bhagat Singh Colony, Industrial Area, Sabzi Mandi disposal, Village Nagra and Sheetal Nagar, being discharged into Kala Singhian drain.

The details are as under:

- 1. Outlet of Kalia Colony:** Not yet connected with M.C. sewer.
- 2. Outlet of Shaheed Bhagat Singh Colony:** Connected with M.C. sewer, but bye-pass arrangements in the form of M.S. Pipeline still exists.
- 3. Outlet of Industrial Area:** Connected with M.C. sewer, but there is an overflow pipeline provided and untreated sewage was being discharged into Kala Singhian Drain.
- 4. Outlet of Sabzi Mandi disposal:** Connected with M.C. sewer. But some sewage was found still discharging into Kala Sanghian Drain, which is required to be diverted to STP. The M.C Jalandhar has failed to clean the sewer line, so far.
- 5. Outlet of M.C. Nagra:** Outlet has been connected to sewerage system.
- 6. Outlet of Shital Nagar:** Outlet is yet to be connected with M.C sewer.
- 7. Sabzi Mandi disposal:** It was informed that Mandi Board Department has failed to divert the outlet of Sabji Mandi into Kala Sanghian Drain so far and still untreated sewage is discharged into Kala Sanghian Drain.

Chairman of the Monitoring Committee directed the officers of Mandi Board to deposit the necessary funds with the M.C. Jalandhar within 7 days to get connectivity of Mandi Board disposal system with sewerage system of M.C., Jalandhar leading to STP with 15 days.

4.10 Closing of outlets of village Raowali and Bulandpur, presently being discharged into Kala Singhian Drain

Chairman of the Monitoring Committee directed the Deputy Commissioner, Jalandhar to hold meeting with the Executive Engineer, Deptt. of Rural Development & Panchayat and DDPO and direct them to plug these outlets by 31.10.2019.

4.11 Outlets of Dairies located at Village Nallah, District Jalandhar

Chairman of the Monitoring Committee directed the Deputy Commissioner, Jalandhar to hold meeting with PEDA, DDPO and Commissioner, M.C. Jalandhar and direct them to install biogas plant as well as ETP for management of effluent from these dairies by 30.6.2020.

4.12 Cleaning/desilting of the sewer line by M.C. Jalandhar:

Chairman of the Monitoring Committee directed the Commissioner, M.C. Jalandhar to clean/desilt the choked sewer line using super suction machine and ensure that the said work shall be completed by 31.10.2019.

4.13 Checking the performance of CETP for Leather Complex, Jalandhar:

To check the performance of existing CETP Leather Complex, Jalandhar, the following Monitoring Mechanism have been adopted at CETP site:

- EMF Meter at the outlet of CETP, Leather Complex has been installed.
- pH measuring sensor system has been put in place, but the same is yet to be calibrated.
- Connectivity of OCEMS with CPCB & PPCB servers has been made but the system is not showing the data and the same is being calibrated.
- Sludge generated from the CETP is being regularly shifted to TSDF, Nimbuan.

4.14 Upgradation / modification of Existing CETP for Leather Complex, Jalandhar

Chairman of the Monitoring Committee directed the Chairman Interim Committee for PETS that the DPR may be got appraised and upgrade/modification of existing CETP shall be made by 31.03.2020 to meet with the prescribed standards.

4.15 100 MLD STP, Pholriwal: Upgradation /rehabilitation of existing UASB system, Status of operation of existing components of STP and Utilization of bio gas of UASB system.

Chairman of the Monitoring Committee directed that the matter of upgradation/rehabilitation or installation of new STP, based on new technology, at Pholriwal may be taken up in the next State level meeting for which the necessary agenda may be prepared by the Nodal Officer on behalf of the Deptt. of Environment, Govt. of Punjab and shall be placed in the meeting.

4.16 Restricted supply of fresh water for domestic usage to the residents of Jalandhar city to reduce wastewater discharge

Sant Seechewal raised the issue that presently about 250-300 lpcd water is being used in Jalandhar city instead of norms of 135 lpcd resulting in generation of huge quantity of discharge of sewage and more hydraulic load on the existing STPs. He opined that in case the water supply is regulated and supplied uniformly to all the inhabitants of the towns, the quantity of sewage shall be less and present capacity of STP may be sufficient to treat the wastewater.

The matter was discussed in detail and Chairman of the Monitoring Committee decided as under:

- **The detailed plan w.r.t. regulated and uniform supply of water to be given to the residents of Jalandhar city may be prepared by M.C., Jalandhar by 31.08.2019.**
- **Work may be started on 01.09.2019.**
- **Whole exercise shall be completed by 30.11.2019.**

A detailed report in the matter may be submitted to the Monitoring Committee on 01.12.2019.

4.17 Field visit by the Monitoring Committee

After the meeting, the members of the Monitoring Committee, Officers of Punjab Pollution Control Board, M.C. Jalandhar, PWSSB & PSIEC made joint visit on the same day i.e. 1.8.2019 to the following areas:

(i) STP Peer Daad (50 MLD capacity):

Member of the Monitoring Committee desired as under:

- **The detailed study w.r.t. each components of STP may be carried by PWSSB by 15.08.2019.**
- **All the necessary rectifications be made by 31.08.2019.**
- **Punjab Pollution Control Board shall monitor the STP in the first week of September, 2019.**

ii) M/s Metro Milk Products Ltd., Sports & Surgical Goods Complex, Jalandhar

The Monitoring Committee visited the industry on 1.8.2019. During visit, the effluent sample from final outlet of ETP and from aeration tank were

collected for analysis of parameters as prescribed for Milk Plant and MLVSS & MLSS in the aeration system. The visual observations indicate that the quality of treated effluent sample was found to be almost clear in colour. However, the approach to the ETP is not easily accessible.

Therefore, the Committee directed the owner of the industry to make the ETP easily approachable and accessible to facilitate the regulating body for effective monitoring of the components of the ETP.

iii) M/s Kalsi Pumps Pvt. Ltd., Sports & Surgical Goods Complex, Jalandhar

The industry is engaged in the manufacturing of bathroom fitting items by involving various machining & electroplating processes. Collection Sintex tank of capacity 10,000 liters has been provided to collect the effluent generated from the electroplating section. The representative of the industry shown his record w.r.t. lifting of effluent by M/s JBR Technology Ltd., Ludhiana and fresh water consumption.

After examining the record, the Committee observed that there is need to conduct comprehensive water audit of the industry to verify the quantity of effluent discharged by the industry and lifted by M/s JBR Technology and ensure that these quantities should be matching to each other.

The Monitoring Committee directed Punjab Pollution Control Board to carry out comprehensive water audit w.r.t. fresh water consumption, water losses in the electroplating process, quantity of wastewater generation, quantity of effluent lifted and the remaining quantity left in the collection chamber. The possibility of installation of metering system on all these points may also be explored.

iv) Meeting with Rubber Manufacturer Association, Jalandhar

During visit to the Kala Singhian drain, the member of the Committee observed that lot of rubber waste was found thrown along the said drain. Therefore, the meeting was held with the Rubber Manufacturing Association, Jalandhar.

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Rubber Manufacturer Association was asked to get lift the rubber waste and dispose off the same scientifically and it may be ensured that no waste is thrown along the bank of Kala Singhian Drain. The Association should also keep strict vigil on the disposal of rubber waste and list of the culprits may be supplied to PPCB to take legal action against them.

4.18 Other issues

4.18.1 Survey of Kala Singhian drain

During the visit to Kala Singhian drain near STP Peer Daad, the Committee observed that the quantity of effluent flowing into the drain was quite high, therefore, the Committee decided as under:

Complete survey of Kala Singhian Drain from its origin point to the downstream of STP Peer Daad may be conducted by PPCB, Jalandhar within 15 days. During the survey, the effluent samples from point sources may be collected for analysis of various parameters. The discharges of all these point sources may also be measured including the discharge from 50 MLD STP Peer Daad. The quantity of cumulative discharge flowing into Kala Singhian Drain may be measured at the downstream of the outlet of 50 MLD Basti Peer Daad STP and be compared with the total discharge of various outlets entering into the Kala Singhian Drain so as to ascertain the plugging of the outlets falling into Kala Singhian Drain.

4.18.2 Funds arrangements for operation and maintenance of STPs by M.C., Jalandhar.

During survey to STP, Basti Peer Daad (50 MLD), the representative of Contractor, operating of ETP, informed that MC Jalandhar has not made any payment for the last 6 months and the Company is operating STP at its own cost. The Committee felt that there is need to get reserve the funds for operation and maintenance of STPs of Jalandhar for its regular and interrupted operation. Fund flow system may also be linked with GST share received by M.C, Jalandhar.

The Monitoring Committee decided that Chief Environmental Engineer, Jalandhar shall take up the matter with Commissioner, Municipal Corporation, Jalandhar and he will

also corroborate the funds status with GST share received by M.C., Jalandhar.

5.0 Recommendations made by the monitoring committee during its visit to common effluent treatment plant (CETP) at Baddi (Himachal Pradesh) on 09.09.2019.

Based on the complaint made by village Panchayat Mallpur, P.O. Bhud, Tehsil Baddi, Distt. Solan with regard to discharge of untreated / partially treated effluent of CETP into the Sarsa River leading to River Sutlej and affecting the water sources of nearby villages, the Monitoring Committee visited CETP of capacity 25 MLD, installed at village Kenduwal Mallpur, P.O. Bhud, Tehsil Baddi, Distt. Solan (HP) on 9.9.2019. The detailed report is annexed as per **Annexure-4**. The report was sent to the Chairman, Himachal Pradesh Pollution Control Board vide this office letter no. CEC/2019/447 dated 3.10.2019 to take necessary action on the recommendations of the Monitoring Committee.

The recommendations made by the Monitoring Committee in its report are mentioned as under:

Recommendations

1. Since the outlet of CETP has been maintained to discharge its effluent into Sarsa River further leading to River Sutlej and CETP is not meeting with the prescribed standards for the parameters namely BOD, TSS, TDS, Sulphide and Bioassay. As such, it degrades the quality of water of Sarsa River exorbitantly and also affects aquatic life. Therefore, an environmental compensation amounting to Rs.1.00 crores may be imposed upon the industry. In case any Bank Guarantee earlier submitted by the CETP operator/SPV, Baddi, the same may also be encashed. Accordingly, the Chairman, Himachal Pradesh Pollution Control Board shall issue necessary orders/ directions under the provisions of the Water Act, 1974 w.r.t. imposition of the said environmental compensation and encashment of Bank guarantee. The said environmental compensation amount may be utilized for rejuvenation of water quality of River Sarsa and subsequently River Sutlej.
2. M/s Baddi Infrastructure, Baddi, the SPV or CETP operator shall upgrade its CETP with Zero Liquid Discharge Technology within 6 months to achieve Zero Liquid Discharge and ensure that no treated/untreated effluent is discharged into Sarsa River further leading to river Sutlej.
3. The Chairman, Himachal Pradesh Pollution Control Board shall get performance guarantee amounting to Rs. 50.00 lakhs to ensure that

CETP is upgraded to achieve the zero liquid discharge in a time bound manner and necessary directions under the provisions of the Water Act, 1974 shall be issued by Chairman, HPSPCB to SPV namely M/s Baddi Infrastructure, Baddi and CETP Operator.

4. The Chairman, Himachal Pradesh Pollution Control Board shall revoke the consent, if granted, under the provisions of Water Act, 1974.
5. Since the pretreatment systems are to be provided by member industries, as such, the sludge / solid waste generated from pretreatment system of these industries may not be allowed to be sent to CETP site. The hazardous waste generated from pre-treatment system of the member industries shall be sent to nearby TSDF by individual industries.
6. SPV/ CETP operator shall install electromagnetic flow meter at the inlet and outlet of the collection tank. After installation of zero liquid discharge technology, the recovered effluent from CETP shall be recycled back into the processes of the industry and the residue in the form of hazardous sludge after drying into the drier shall be sent to nearby TSDF.
7. An environmental management cell including NGOs and Civil Society may be setup by SPV/ CETP operator. In the Environmental Management Cell, the qualified Engineers/Scientists shall also be employed by SPV/CETP operator.
8. All the tankers deployed for collection of effluent from member industries may be provided with GPS system having its connectivity at CETP site and HPPCB site.
9. Online Continuous Effluent Monitoring Systems (OCEMS), which was not in operation on the day of visit, shall be got calibrated and made operational within 15 days and the system shall have its connectivity with HPPCB and CPCB Servers.
10. Necessary CCTV cameras, for e-surveillance of the various components of CETP, shall be installed by SPV/CETP operator within 15 days and these cameras shall have its connectivity with HPSPCB server.
11. The Chairman, Himachal Pradesh Pollution Control Board shall take up the matter with the Department of Irrigation and Public Health Engineering for early installation of Sewage treatment Plant for the treatment of the sewage of the town.

6.0 Recommendations made by the Monitoring Committee during its visit to the industries of Gaunspur, Ludhiana on 11.09.2019.

The monitoring committee visited the industries of Gaunspur, Ludhiana on 11.9.2019. The detailed report submitted by the Committee is annexed as per **Annexure-5**. The report was sent to Chairman PPCB vide this office letter no CEC/sb/2019/41 dated 18.10.2019 to take necessary action on the

recommendations of the monitoring committee. The recommendations made w.r.t. each industry are mentioned as under: -

6.1 Saber Paper Board Pvt. Ltd., Vill. Gaunspur, Hambran Road, Ludhiana

Recommendations

- i) PPCB shall verify from the office of PSPCL whether the power connection of the industry has been disconnected or not. It shall also verify the record of the industry w.r.t. receipt of raw material/chemicals, dispatch of its products during the period of its closure i.e. 18.06.2019 till date.
- ii) In case the power connection of the industry is not disconnected by PSPCL, Chairman, PPCB shall get explanation of the PSPCL and take further action as per law.
- iii) Chairman, PPCB shall also issue following directions under the provisions of the Water Act, 1974 to the industry:

"The industry shall upgrade its ETP including the recycling of the treated wastewater, treatment of the purge water to meet with the prescribed standards, disposal of treated purge water onto land for plantation within premises and drying of sludge generated by the industry and disposal of dried sludge in an environmentally sound manner by 30.11.2019".

- iv) The industry shall not be allowed to discharge its treated/untreated effluent into Budha Nallah or any other drain.
- v) The industry shall dispose of rice husk ash in an environmentally sound manner.

6.2 Shree Ganesh Agroils, Village Gaunspur, Ludhiana

Recommendations

The Monitoring Committee recommends that Chairman, PPCB shall depute an Environment Protection squad to make surprise visit of the industry and said squad shall carry out comprehensive inspection of the industry, prepare its water balance statement, assess the quantity of wastewater recycled into the processes of the industry, quantity of purge water discharged & its disposal, quantity of sludge generation & its drying mechanism and adequacy of the land available for disposal of treated purge wastewater conforming to the prescribed standards.

6.3 Satkar Paper Mills Pvt. Ltd, Village Gaunspur, Humbran, Ludhiana

Recommendations

1. Chairman, Punjab Pollution Control Board shall initiate action to revoke consent to operate under the provisions of the Water Act, 1974 and Air Act, 1981, in case these have been granted to the industry.

2. Chairman, Punjab Pollution Control Board shall initiate action to issue directions for closure of the industry as per the provisions of the Water Act, 1974.
3. Chairman, Punjab Pollution Control Board shall impose an environmental compensation amounting to Rs. 25 lakh on the industry for violating the provisions of the Water Act, 1974 and disposing of the effluent in slurry form containing high concentration of TSS, TDS, COD & BOD on the adjoining land and damaging the environment. The said Environmental compensation amount shall be utilized for rejuvenation of quality of environment.
4. The industry shall upgrade its effluent treatment plant and recycling system within 3 months and ensure that the purge water generated from recycling system should be treated adequately so that it may conform to the standards prescribed by the Board. The treated purge water, conforming to the prescribed standards, may be utilized for plantation purposes. The sludge generated from the recycling system/collection tank/clarifier should be dried up through suitable drying mechanism and shall be disposed off in an environmentally sound manner. No treated/untreated wastewater and solid waste shall be allowed to discharge into any drain/Nallah/River. Water meters may be installed at the withdrawal point of water source, recycling system, purge water outlet and collection tank and prepare water balance statement on quarterly basis and submit the same to PPCB for verification.

6.4 Punjab Paper Mills Ltd., Vill. Gaunspur, Ludhiana

Recommendations

In view of the analysis results and observations of the Monitoring Committee during its visit to the industry on 11.09.2019, the following recommendations are made:

1. Chairman, PPCB shall initiate action to revoke consent to operate under the provisions of the Water Act, 1974 and Air Act, 1981, in case, these have been granted to the industry.
2. Chairman, PPCB shall initiate action to issue directions for closure of the industry under the provisions of the Water Act, 1974.
3. Chairman, PPCB shall impose an environmental compensation amounting to Rs. 25 lakh on the industry for violating the provision of the Water Act, 1974 for disposing of its effluent in slurry form containing very high values of TSS, COD and BOD in the plantation area and thus damaging the environment.
4. The industry shall upgrade its effluent treatment plant and recycling system within 3 months and ensure that the purge water generated from recycling system should be treated adequately so that it may conform to the standards prescribed by the Board. The treated purge water, conforming to the prescribed standards,

may be utilized for plantation purposes. The sludge generated from the recycling system/collection tank/clarifier should be dried up through suitable drying mechanism and shall be disposed off in an environmentally sound manner. No treated/untreated wastewater and solid waste shall be allowed to discharge into any drain/Nallah/River. Water meters may be installed at the withdrawal point of water source, recycling system, purge water outlet and collection tank and prepare water balance statement on quarterly basis and submit the same to PPCB for verification.

6.5 Hemkunt Coated Paper Pvt. Ltd., Village Humbran, Ludhiana

Recommendations

Since, the industry is lying closed for the last few months, as such, the industry has to obtain consent to operate of the Board under the provisions of Water Act, 1974 and Air Act, 1981 before starting its operation.

Therefore, the Monitoring Committee recommends that Chairman, Punjab Pollution Control Board shall initiate action to issue necessary directions under the provisions of the Water Act, 1974 and Air Act, 1981 to the industry not to operate its industrial unit without making the effluent treatment plant and air pollution control device in operational conditions and getting consent to operate under the provisions of Water Act, 1974 and Air Act, 1981, failing which the Board shall take legal action against the industry under the provisions of the Water Act, 1974 and Air Act, 1981.

7.0 Directions given / recommendations made by the Monitoring Committee during its review meeting with the District level officers of Distt. Kapurthala w.r.t. control of pollution in Holy Bein on 08.10.2019 at Sultanpur Lodhi.

The Monitoring Committee under the chairmanship of Justice Jasbir Singh, former Judge, Punjab & Haryana High Court and now as Chairman of the Committee held its review meeting with the District Level Officers of District Kapurthala at Sultanpur Lodhi on 8.10.2019. The minutes of the review meeting are annexed as per **Annexure-6**. These minutes were sent to all the concerned District Level Officers vide this office letter no. CEC/2019/469 dated 9.10.2019 to take necessary action on the directions/recommendations of the Monitoring Committee. During the review meeting, the monitoring committee has given following directions/made recommendations:

7.1 Operation of STP Sultanpur Lodhi

Chairman of the Monitoring Committee directed the Executive Officer, Municipal Council Sultanpur Lodhi as under: -

- Necessary arrangements be made for effective disinfection of treated sewage to control F.Coli parameter within the prescribed norms by 31.10.2019.
- MC, Sultanpur Lodhi shall ensure that no untreated/treated sewage is discharged into Holy Bein in any circumstance.

7.2 Operation of STP Kapurthala

The Chairman of the monitoring committee directed as under:

- Municipal council Kapurthala shall release funds amounting to Rs 1.75 crore to PWSSB by 15.10.2019 for repairing the various components of STP.
- PWSSB shall open tender by 10.10.2019.
- Work shall be allotted by PWSSB by 15.10.2019.
- The repairing of various components of STP including UASB reactor shall be completed by 31.01.2020.
- The Municipal Council shall ensure that the treated sewage is utilized for irrigation purposes immediately after the harvesting of paddy crop and will not discharge any sewage (treated/untreated) into Holy Bein.
- PPCB shall monitor the progress with regard to repairing of various components of STP and other works fortnightly and submit the report to the monitoring committee.

7.3 Plugging of outlet of Wadala Drain carrying part of untreated domestic effluent of Kapurthala Town into Holy Bein.

The Chairman of the monitoring committee directed that the remaining 3 outlets shall be plugged by MC, Kapurthala by 20.10.2019.

7.4 Plugging of discharge of sewage of village Kheda Dona into Holy Bein.

Chairman of the monitoring committee directed that the Department of Rural Development & Panchayat to make application to PSPCL within 7 working days to release regular electric connection based on 24 hours regular electric supply at the disposal system of village Kheda Dona.

7.5 Installation of STP of Capacity 3 MLD for treatment of sewage of Rawal and its colonies, presently, being discharged into Bhulana Drain further leading to Holy Bein.

The Chairman of the committee directed as under:

- PWSSB shall start tendering process by 15-10-2019.

- DC Kapurthala shall hold meeting with all the stake holder departments and get release the remaining funds to PWSSB. The said meeting may be conducted before 15.10.2019.

7.6 Release of 350 cusec of water from Mukerian Hydrel Project into Holy Bein

Chairman of the monitoring committee directed that the Department of Water Resources, Government of Punjab shall ensure the release of 350 cusec of water from Mukerian Hydrel Project into Holy Bein to maintain aquatic life in the Bein.

7.7 Removal of water Hyacinth from Holy Bein for its free flow.

The Chairman of the monitoring committee directed that water Hyacinth from Holy Bein may be removed by the Department of Water Resource, Government of Punjab within 15 days.

8.0 Directions given / recommendations made by the Monitoring Committee during its review meeting with the District level officers of Distt. Kapurthala w.r.t. control of pollution in Holy Bein on 17.10.2019 at Kapurthala.

The Monitoring Committee under the chairmanship of Justice Jasbir Singh, former Judge, Punjab & Haryana High Court and now as Chairman of the Committee held its review meeting with the District Level Officers of District Kapurthala at Kapurthala on 17.10.2019. The minutes of the review meeting are annexed as per **Annexure-7**. The minutes of the meeting were sent to the concerned officers vide this office letter no. CEC/SB/2019/45-51 dated 21.10.2019 to take necessary action on the directions given/recommendations made by the Monitoring Committee. During the review meeting, the monitoring committee has given following directions/made recommendations:

8.1 Operation of STP Sultanpur Lodhi

Chairman of the monitoring committee directed as under:

- Municipal Council, Sultanpur Lodhi shall ensure that all the discharges of sewage into Sultanpur drain should be stopped by 20.10.2019
- No treated/untreated sewage shall be discharged into Holy Bein in any circumstance.

8.2 Operation of STP, Kapurthala

Chairman of the Monitoring Committee directed as under:

- Municipal Council Kapurthala shall deposit the 2nd installment of Rs 50 Lac for repair of STP to PWSSB on 5.11.2019.
- The work shall be allotted for repairing of STP by 30.10.2019.
- The repairing of various components of STP including UASB reactor shall be completed by 31-01-2020.

- The Municipal Council shall ensure that the treated sewage is utilized for irrigation purposes immediately after the harvesting of paddy crop and shall not discharge any sewage (treated/untreated) into Holy Bein.
- PPCB shall monitor the progress with regard to repairing of various components of STP and other works fortnightly and submit the report to the Monitoring Committee.

8.3 Plugging of outlet of Wadala Drain, carrying untreated domestic sewage of Kapurthala Town into Holy Bein.

The Chairman of the Monitoring Committee directed that PPCB shall verify the status of closing of these 6 outlets within 7 days and submit the report to the Monitoring Committee.

8.4 Plugging of discharge of sewage of village Kheda Dona into Holy Bein.

The Chairman of the monitoring committee directed as under:

- PSPCL shall regularize the electric connection for 24 hours within 10 days so that lifting pumps are operated regularly to lift the sewage into pond, provided across the Bein.
- Village Panchayat Kheda Dona shall depute a person for regular operation of pumps.
- The treated sewage of pond shall be utilized for irrigation purposes and village Panchayat shall ensure that no treated/untreated sewage is discharged into Holy Bein.

8.5 Installation of STP of capacity 3 MLD for treatment of sewage of Rawal and its colonies, presently, being discharged into Bhulana drain further leading to Holy Bein.

After detailed discussion, the Chairman of the Monitoring Committee directed as under:

- DDPO, Kapurthala shall demarcate the available Panchayat land near Holy Bein within 02 days.
- The construction of pond system to treat the sewage coming through Bhulana drain shall be started by JDA within 7 days.
- The treated sewage of pond system shall be utilized for irrigation purposes and no treated/untreated sewage shall be discharged into Holy Bein.

Re

- Necessary funds for installation of STP of capacity 3 MLD shall be arranged jointly by JDA and Department of Rural Development and Panchayat by 31.12.2019.
- The funds so arranged by these two departments shall be transferred to PWSSB for installation of STP of 3 MLD by 10.01.2020 and thereafter work of STP may be started immediately.

8.6 Release of 350 cusec of water from Mukerian Hydel Project into Holy Bein.

It was decided that the Department of Water Resources, shall ensure the release of 350 cusec of water from Mukerian Hydel Project into Holy Bein to maintain aquatic life in the Bein.

8.7 Removal of water Hyacinth from Holy Bein for free flow.

The Chairman of the Monitoring Committee directed that water Hyacinth from Holy Bein may be removed by Department of Water Resource within 15 days.

8.8 Other Issues:

8.8.1 Management of solid and liquid waste to be generated during the celebration of 550th Birth Anniversary of Sri Guru Nanak Dev Ji at Sultanpur Lodhi.

The Chairman of the Monitoring Committee directed as under

- The District Administration shall submit copy of Action Plan and project report prepared for management of solid and liquid waste to be generated during the celebration events of 550th Birth Anniversary of Sri Guru Nanak Dev Ji.
- The concessionaire shall comply with the provisions of Solid Waste Management Rules, 2016 and Water Act, 1974 in letter and spirit and shall not discharge any liquid waste into sewerage system of Sultanpur Lodhi or directly into Bein, failing which high amount of environment compensation shall be imposed upon the concessionaire along with legal action as per the provisions of Water Act, 1974 and Solid Waste Management Rules, 2016.

8.8.2 Higher rate of biodegradable carry bags

Regarding high rates of biodegradable carry bags available in the market, a substitute of plastic bags, as informed by the District Administration in the

meeting, Chairman of the Monitoring Committee assured that the matter shall be brought into the notice of Principal Secretary, Department of Local Government, Punjab, by the Monitoring Committee to look into the issue.

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.

9.1. River Sutlej

Status of sewage treatment plants installed for the towns

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

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9.1.1 Performance of Exiting STPs (Jan 2018 to June 2018): Earlier Status

Sr.no	Name of STP	Cap (MLD)	Jan 2018 to June, 2018 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-Coli (MPN/100 ml)
1	Goniana	3	45	30	1000
2	Malout*	3	60	66	1100
3	Malout*	10	19	25	930
4	Muktsar	9	15	37	920
5	Muktsar	6	42	37	930
6	Muktsar	4	-	-	-
7	Abohar	25	18	37	1000
8	Dharamkot	4	-	-	-
9	Makhu	4	11	12	910
10	Moga	27	-	-	-
11	Talwandi Bhai	4	-	-	-
12	Zira	8	15	16	930
13	Jalalabad	8	160	113	1200
14	Banga	3	16	-	890
15	Hoshiarpur	30	6	12	480
16	Nawan Shahar	6	12	9	750
17	Jalandhar	100	26	34	1433
18	Jalandhar (Jaitewali)	25	5	8	610
19	Jalandhar (Bambianwali)	10	8	15	1000
20	Jalandhar Pholriwal, Gridhari Lal)	25	10	12	1100
21	Jalandhar (Pholriwal-Eco Chem)	25	10	16	930
22	Jalandhar (Pir Dad)	50	24	29	1167
23	Nakodar*	6	-	-	-
24	Phagwara (North)	20	34	56	1800
25	Phagwara Hadibad	8	-	-	-
26	Phagwara Palahi Road	8	-	-	-
27	Phillaur	3	31	46	2000
28	Phillaur (Tallan Road)	3	15	30	983
29	Machhiwara	4	-	-	-
30	Sahnewal	7	24	32	960
31	Jagraon	16	21	22	1450
32	Jagraon	12	10	18	1010
33	Ludhiana (Balloke)	152	72	78	20333
34	Ludhiana (Balloke)	105	46	40	8000
35	Ludhiana (Bhattian)	111	87	76	12000
36	Ludhiana (Bhattian)	50	19	21	1100
37	Ludhiana (Jamalpur)	48	200	219	78000
38	Nangal	8	27	48	1050
39	Nangal*	7	18	17	1010
40	Badi haveli, Ropar	10	7	10	615
41	Anandpur Sahib	8	12	19	920

42	Kurali	5	9	22	830
43	Burari (Nangal)	5	14	13	910
44	Sadabarat	2	7	12	605
45	Rasoolpur (Ropar)	3	7	6	540

The monitoring data, prepared by PPCB, for the period January, 2018 to June, 2018 indicate that 51% of existing STPs were complying with the norms w.r.t. BOD, TSS and F.Coli parameters and 75% of STPs were found complying only TSS parameter and 51% of STPs were found complying with F.coli parameter and 62% of STPs are complying with the norms of BOD parameter.

9.1.2 Performance of Existing STPs (July, 2018 to Dec, 2018)

Sr.no	Name of STP	Cap	July 2018 to Dec, 2018 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-Coli (MPN/100 ml)
1	Goniana	3	60	64	2600
2	Malout*	3	32	26	3800
3	Malout*	10	76	51	1300
4	Muktsar	9	-	-	-
5	Muktsar	6	-	-	-
6	Muktsar	4	-	-	-
7	Abohar	25	38	83	3550
8	Dharamkot	4	23	51	1133
9	Makhu	4	27	107	73870
10	Moga	27	16	42	2767
11	Talwandi Bhai	4	12	30	873
12	Zira	8	10	19	977
13	Jalalabad	8	125	208	26150
14	Banga	3	11	12	717
15	Hoshiarpur	30	11	19	1230
16	Nawan Shahar	6	13	15	608
17	Jalandhar	100	33	54	12433
18	Jalandhar (Jaitewali)	25	8	12	700
19	Jalandhar (Bambianwali)	10	10	15	230
20	Jalandhar (Pholriwal, Gridhari Lal)	25	17	14	1110
21	Jalandhar (Pholriwal- Eco Chem)	25	14	17	1397
22	Jalandhar (Pir Dad)	50	16	36	1200
23	Nakodar*	6	10	17	680
24	Phagwara (North)	20	27	36	2433
25	Phagwara Hadibad	8	20	24	2033
26	Phagwara Palahi Road	8	15	31	1330
27	Phillaur	3	33	62	6650

28	Phillaur (Tallan Road)	3	11	15	580
29	Machhiwara	4	7	17	1100
30	Sahnewal	7	15	-	800
31	Jagraon	16	73	80	26500
32	Jagraon	12	9	18	390
33	Ludhiana (Balloke)	152	40	35	130000
34	Ludhiana (Balloke)	105	32	76	33000
35	Ludhiana (Bhattian)	111	34	62	17000
36	Ludhiana (Bhattian)	50	13	29	14000
37	Ludhiana (Jamalpur)	48	132	239	13000
38	Nangal	8	38	72	2055
39	Nangal*	7	15	18	1000
40	Badi haveli, Ropar	10	37	64	870
41	Anandpur Sahib	8	11	23	865
42	Kurali	5	7	11	1050
43	Burari (Nangal)	5	10	27	980
44	Sadabarat	2	10	11	1115
45	Rasoolpur (Ropar)	3	10	14	930

The monitoring data, prepared by PPCB, for the period July, 2018 to December, 2018 indicate that 33% of the STPs are complying with the norms w.r.t. BOD, TSS and F.Coli parameters, whereas 62% of STPs are complying with BOD norms and 84% of STPs are complying with TSS parameters and 33% of STPs are complying with F-Coli parameter.

9.1.3 Performance of Exiting STPs (Jan, 2019 to June, 2019)

Sr.no	Name of STP	Cap (MLD)	Jan 2019 to June, 2019 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-Coli (MPN/100 ml)
1	Goniana	3	48	76	5950
2	Malout*	3	51	78	5350
3	Malout*	10	14	17	1008
4	Muktsar	9	17	30	1270
5	Muktsar	6	73	108	20475
6	Muktsar	4	-	-	-
7	Abohar	25	11	13	703
8	Dharamkot	4	9	11	703
9	Makhu	4	10	12	695
10	Moga	27	10	12	750
11	Talwandi Bhai	4	9	11	770
12	Zira	8	9	11	792
13	Jalalabad	8	39	37	6604
14	Banga	3	11	16	630
15	Hoshiarpur	30	34	53	22655
16	Nawan Shahar	6	12	7	630
17	Jalandhar	100	31	35	8967
18	Jalandhar (Jaitewali)	25	11	4	568

19	Jalandhar (Bambianwali)	10	12	17	365
20	Jalandhar (Pholriwal, Gridhari Lal)	25	8	6	1533
21	Jalandhar (Pholriwal-Eco Chem)	25	10	18	1732
22	Jalandhar (Pir Dad)	50	21	50	3080
23	Nakodar*	6	8	18	1390
24	Phagwara (North)	20	36	37	6800
25	Phagwara Hadibad	8	23	36	1480
26	Phagwara Palahi Road	8	28	56	2220
27	Phillaur	3	28	37	11167
28	Phillaur (Tallan Road)	3	42	58	89023
29	Machhiwara	4	9	16	690
30	Sahnewal	7	12	25	1938
31	Jagraon	16	13	26	1963
32	Jagraon	12	8	16	796
33	Ludhiana (Balloke)	152	57	86	188750
34	Ludhiana (Balloke)	105	40	58	11277
35	Ludhiana (Bhattian)	111	64	78	406550
36	Ludhiana (Bhattian)	50	20	19	4526
37	Ludhiana (Jamalpur)	48	103	159	91200
38	Nangal	8	15	16	890
39	Nangal*	7	11	14	782
40	Badi haveli, Ropar	10	14	17	854
41	Anandpur Sahib	8	13	22	772
42	Kurali	5	10	14	876
43	Burari (Nangal)	5	11	13	611
44	Sadabarat	2	11	14	733
45	Rasoolpur (Ropar)	3	8	10	503
46	East Jalndhar Cantt-I	-	-	-	-

The monitoring data, prepared by PPCB, for the period January, 2019 to June, 2019 indicate that 47% of STPs are complying with the norms w.r.t BOD, TSS and F.coli parameters, whereas 73% STPs are complying with BOD parameter and 93% STPs are complying with TSS parameter and 47% of STPs are complying with the norms of F.Coli parameter.

9.1.4 Performance of existing STPs (July, 2019 to September, 2019)

Sr.no	Name of STP	Capacity (MLD)	July, 2019 to September, 2019 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-Coli (MPN/100 ml)
1	Goniana	3	40	78	1203
2	Malout*	3	45	75	9373

3	Malout*	10	18	36	810
4	Muktsar	8.7	111	240	41800
5	Muktsar	5.7	53	176	5700
6	Muktsar	3.5	-	-	-
7	Abohar	25	7	8	787
8	Dharamkot	4	8	8	757
9	Makhu	4	8	7	687
10	Moga	27	7	7	643
11	Talwandi Bhai	4	8	9	563
12	Zira	8	8	10	630
13	Jalalabad	8	72	106	13000
14	Banga	3	10	16	510
15	Hoshiarpur	30	18	37	737
16	Nawan Shahr	6	10	10	597
17	Jalandhar	100	25	31	4300
18	Jalandhar (Jaitewali)	25	10	8	443
19	Jalandhar (Bambianwali)	10	10	17	417
20	Jalandhar (Pholriwal, Gridhari Lal)	25	8	-	553
21	Jalandhar (Pholriwal-Eco Chem)	25	10	4	553
22	Jalandhar (Pir Dad)	50	20	32	640
23	Nakodar*	6	8	16	630
24	Phagwara (North)	20	28	35	3707
25	Phagwara Hadibad	8	10	13	697
26	Phagwara Palahi Road	8	19	26	4833
27	Phillaur	2.6	29	56	6867
28	Phillaur (Talian Road)	3	14	16	1115
29	Machhiwara	4	7	17	920
30	Sahnewal	7	11	18	647
31	Jagraon	16	15	24	27367
32	Jagraon	12	10	14	1400
33	Ludhiana (Balloke)	152	65	73	17950
34	Ludhiana (Balloke)	105	151	145	1210
35	Ludhiana (Bhattian)	111	59	115	45000

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36	Ludhiana (Bhattian)	50	31	34	370
37	Ludhiana (Jamalpur)	48	158	192	109500
38	Nangal	8	11	11	843
39	Nangal*	6.7	12	22	763
40	Badi haveli, Ropar	10	11	12	763
41	Anandpur Sahib	8	8	11	733
42	Kurali	5	8	7	800
43	Burari (Nangal)	5	6	6	540
44	Sadabarat	2	7	10	760
45	Rasoolpur (Ropar)	2.5	8	12	803

The monitoring data, prepared by PPCB, for the period July, 2019 to Sep, 2019 indicated that 62% of STPs are complying with the norms w.r.t the parameters namely BOD, TSS and F.coli parameters, whereas 78% STPs are complying with BOD parameter and 84% STPs are complying with the norms of TSS parameter and 62% of the STPs are complying with the norms of F.coli parameter.

9.1.5 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			

9.1.6 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
1.	Balachaur	4	31.10.2020	Tender called. To be opened on 23.10.2019
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		

9.1.7 STPs under planning but funds yet to be tied up

Sr. no.	Name of the town	STP Capacity (MLD)	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.	Mallan 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	

9.1.8 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.
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		

9.1.9 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

Sr. No	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
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.	Mallan 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

Sr. No	Name of Town	Total Discharge (MLD)	Present Capacity of STP (MLD)	Gap in sewage quantity to be treated (MLD)
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	1421.3	1040.30	381

9.1.10 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:

9.1.10.1. Status of installation of treatment facilities in the villages

Sr. no.	No. of villages	Total discharge (MLD)	Technology to be adopted	Funds requirement (Rs. Crore)	Status of funds	Target date for completion / commissioning
1	75	12.3	Seechewal model / Haripur model	22.50	Funds yet to be released	31.01.2020

9.1.10.2 Details of villages where treatment facilities shall be installed in 1st phase.

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	50.90
58	Ferozpur	Mamdot	Shahed Jarnal Singh	70	
59	Ferozpur	Mamdot	Har Gobindpura	31	46.48
60	Ferozpur	Mamdot	Basti Jatta Singh	30	
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

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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	

9.1.11 Utilization of treated sewage of the towns for irrigation (status as on 31.12.2018)

S. no.	Name of town/STP	District	Discharge (MLD)	Command area (ha)	Project Status	Date of completion
River Sutlej						
1	Nikku Nagal (BBMB)	Rupnagar	8.5	120	Completed	01-01-2016
2	Naya Nangal (NFL)	Rupnagar	5	200	Completed	01-01-2013
3	Sri Anandpur Sahib	Rupnagar	8.5	150	Completed	01-07-2012
4	Haveli Kalan-Ropar	Rupnagar	10	100	Completed	01-07-2015
5	Sadabarat-Ropar	Rupnagar	2	72	Completed	01-05-2016
6	Rusulpur-Ropar	Rupnagar	2.5	80	Completed	01-02-2018
7	Kurali	Mohali	4	130	Completed	01-07-2016
8	Chamkaur Sahib	Rupnagar	1.7	99	Completed	01-01-2017
9	Machiwara	Ludhiana	4	40	Completed	28-06-2017
10	Dharmkot	Moga	4	45	Completed	26-03-2018
11	Phagwara-1	Kapurthala	20	550	Completed	30.6.2016
12	Goniana	Bathinda	3	102	Completed	17-10-2017
13	Kotfatta	Bathinda	1.5	108	Completed	23-10-2017
14	Maur	Bathinda	5	150	Completed	22-02-2017
15	Fazilka	Fazilka	8	350	Completed	18-01-2017

9.1.11.1 Utilization of treated sewage of the towns for irrigation (status as on 31.12.2018)

Other Towns						
23	Begowal	Ludhiana	1.15	49	Completed	29.6.2017
24	Arrenchan	Ludhiana	2.75	44	Completed	20.4.2016
25	Payal	Ludhiana	1.5	45	Completed	29.6.2017
26	Doraha	Ludhiana	1	45	Completed	27.6.2017
27	Maloud	Ludhiana	15	75	Completed	14.2.2018
28	Talwandi Sabo	Bathinda	3	150	Completed	27.11.2015

9.1.12 Status of projects for utilization of treated sewage for irrigation (status as on 30.9.2019)

S. no.	Name of town/STP	District	Discharge (MLD)	Command area (ha)	Date of start of project	Project Status	Likely completion date	Current status as on 30.9.2019
1	Phagwara-2	Kapurthala	8	95	01-02-2019	Ongoing	30.5.2019	Completed
2	Nakoder	Jalandhar	6	180	01-11-2016	Ongoing	30-06-2019	Completed
3	Phillour	Jalandhar	3	105	01-04-2018	Ongoing	17-06-2019	Completed
4	Muksar (Balamgarh Road)	Sri Mukatsar Sahib	8.5	480	11-05-2016	Ongoing	15-06-2019	Completed
5	Muksar (Sadarwala)	Sri Mukatsar Sahib	7.5	185	15-10-2016	Ongoing	30-06-2019	Completed
6	Malout (Bhagwanpura)	Sri Mukatsar Sahib	3	80	29-05-2016	Ongoing	31-01-2019	Completed
7	Bhucho	Bathinda	3	135	18-07-2015	Ongoing	13-02-2019	Completed
8	Jalalabad	Fazilka	8	200	30-10-2015	Ongoing	31-08-2019	Completed

9.1.13 Proposal for utilization of treated wastewater of STPs (total capacity 466 MLD) of Ludhiana

The monitoring committee had been informed in the 5th meeting held on 23.7.2019 that the department of soil and water conservation is carrying out feasibility study for reuse of treated wastewater of STPs of Ludhiana (466 MLD) for irrigation purposes. The study shall be completed by Sep, 2019.

However, the Deptt. of Soil and Water Conservation has not submitted any feasibility study nor so for with the Monitoring Committee.

9.1.14 Status of CETPs for treatment of effluent of dyeing industries of Ludhiana and effluent of electroplating industries of Jalandhar

Sr. no.	Project	Target date of completion	Progress upto June, 2019	Current status as on 30.9.2019
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 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.

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

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.

9.1.16 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.

9.1.16.1 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. PEDDA has already installed bio-gas power plant of capacity 1 MW. It was proposed by PEDDA 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 dairy complex, Tajpur Road, Ludhiana, which is big source of further degradation of Budha Nallah effluent.**

9.1.17 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.

9.1.18 Water quality of river Sutlej

The monitoring data maintained by PPCB, from January, 2018 to June, 2018 and September, 2018 to October, 2018 was compared with the data for the period January, 2019 to June, 2019 and September, 2019. These data are mentioned as under:

9.1.18.1 Water quality of river Sutlej (Jan, 2018 to June, 2018, Sep, 2018 to Dec, 2018 and Jan, 2019 to June, 2019)

Sr. no.	Locations	Jan, 2018 to June, 2018 (Average)					Sep, 2018 to Dec, 2018 (Average)					Jan, 2019 to June, 2019 (Average)				
		Parameters					Parameters					Parameters				
		DO (mg/l)	BO D (mg/l)	TSS (mg/l)	F.Coli (MPN/100 ml)	T.Coli (MPN/100 ml)	DO (mg/l)	BO D (mg/l)	TSS (mg/l)	F.Coli (MPN/100 ml)	T.Coli (MPN/100 ml)	DO (mg/l)	BO D (mg/l)	TSS (mg/l)	F.Coli (MPN/100 ml)	T.Coli (MPN/100 ml)
1	River Satluj at U/S Nangal	8.1	<1	11	86	242	8.6	0.0	9	34	200	9.2	<1	6	25	125
2	River Satluj at D/S NFL	7.7	<1	16	142	370	8.2	0.0	12	77	280	8.6	<1	8	55	197
3	River Sutej at 100m D/s PACL Nangal	7.6	<1	17	155	390	8.2	0.0	12	115	395	8.5	<1	8	58	205
4	River Satluj at D/s Nangal	7.8	<1	14	115	342	8.4	0.0	10	90	305	8.6	<1	11	59	220
5	River Satluj at Kiratpur Sahib	7.5	<1	13	225	660	8.3	0.0	12	408	968	8.3	<1	12	230	748
6	Ropar Head-Works	7.8	<1	11	233	807	8.1	0.0	11	648	1400	8.4	<1	11	292	1088
7	River Satluj D/S of Rishab-Paper Mills	7.7	<1	13	278	863	7.9	0.4	17	765	1675	8.0	<1	15	387	1178
8	River Satluj U/S Buddha Nallah	6.6	<1	17	948	2117	7.0	0.7	19	1525	3450	7.5	<1	20	915	2622
9	River Satluj at 100 mts D/s after	2.3	81.0	166	21000	46333	3.3	30.0	66	35000	80500	2.7	51.5	64	52833	11666

	Budha Nallah confluence, Ludhiana															
10	River Satluj at Boat Bridge, Dharamkot Nakodar Road	4.0	31.0	52	51833	140167	6.2	8.3	26	41250	83250	4.7	10.2	29	60333	153000
11	River Satluj at D/s East Bein	1.1	15.2	66	16383	24317	5.5	7.5	57	13300	25250	2.9	11.7	38	10983	25833
12	River Satluj at Harike	5.0	4.0	34	11483	15533	6.5	3.3	67	5825	11450	5.8	2.7	32	3880	9040
13	Harike Lake D/S from canal	6.8	2.2	23	1193	2353	7.6	1.7	71	1625	3425	7.6	2.0	34	1255	2883
14	D/S Harike lake	6.8	2.5	20	920	1540	7.2	1.9	56	1550	3525	8.1	1.6	29	2067	4250
15	U/S Hussainiwala H/W Ferozepur	7.4	<1	16	337	1013	6.9	0.7	14	428	1508	8.3	<1	10	515	1850
16	D/S Hussainiwala H/W Ferozepur	7.2	<1	19	333	1150	6.8	0.8	18	443	1400	7.8	<1	12	453	1783

9.1.18.2 Water quality of river Sutlej (September, 2019)

Sr. No.	Point of Sample Collection	DO (mg/l)	BOD (mg/l)	TSS (mg/l)	F.Coli (MPN/100ml)	T.Coli (MPN/100ml)
1.	River Satluj, U/S Nangal	9.0	<1	BDL	46	110
2.	River Satluj D/S NFL	8.0	<1	BDL	70	220
3.	River Satluj at 100m D/s PACL Nangal	8.1	<1	BDL	79	220
4.	River Satluj D/s Nangal	8.9	<1	BDL	79	220
5.	River Satluj at Kiratpur Sahib	8.9	<1	11	70	170
6.	Ropar Head-Works	8.7	<1	24	110	280
7.	River Satluj D/S of Rishab- Paper Mills	7.8	<1	38	170	490
8.	River Satluj U/S Buddha Nallah	6.8	1.8	56	630	2200
9.	Satluj at 100 mts D/s Budha Nallah confluence Ludhiana	5.1	12	62	46000	94000
10.	Satluj at Boat Bridge, Dharamkot Nakodar Road	5.7	4.0	43	11000	17000
11.	Satluj at D/s East Bein	5.6	4.2	38	9400	17000
12.	River Satluj at Harike	5.9	2.8	26	3300	7900
13.	Harike lake D/S from Canal	7.2	1.1	22	920	2100
14.	D/S Harike Lake	7.5	1.2	24	680	1300
15.	U/S Hussainiwala H/W Ferozepur	6.6	<1	24	230	790

16.	D/S Hussainiwala H/W Ferozepur	6.4	1.8	26	490	1100
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9.1.19 Water quality of drains/Nallah

9.1.19.1 Kala Singhian drain monitoring data for the period May to June, 2019 and Sep, 2019

The water quality of Kala Singhian drain was monitored in May to June, 2019 and Sep, 2019 and analysis results are mentioned as under:

9.1.19.2 Kala Singhian drain monitoring data (May, 2019)

Sr. no.	Location	Parameters							
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Cr. (mg/l)	Ni (mg/l)	Zn (mg/l)	Fe (mg/l)	Pb (mg/l)
1	Puli adjoining M/s H.B Industry Unit-II, Raowali, Pathankot Jalandhar Road.	60	190	118	BDL	BDL	0.21	2.44	BDL
2	Puli at Jalandhar-Maqsudan Road, adjoining DAV Play Ground	170	460	122	1.29	2.49	5.82	13.10	1.86
3	Puli at Basti Peer Dad-Leather Complex Road, adjoining Julka Rubber Industry.	112	272	110	BDL	0.11	0.65	3.36	BDL
4	Puli at Athaula Gazipur Road near Karyana Store.	168	440	208	5.04	0.10	0.64	6.94	BDL
5	Puli at Kapurthala – Kala Sangha Road near Gurudwara Tahli Sahib.	124	360	114	2.97	0.13	0.66	6.32	BDL
6	Puli at Billi-Khanpur Road.	160	410	189	2.70	0.16	1.03	7.69	BDL

Re

9.1.19.3 Kala Singhian drain monitoring data (June, 2019)

Sr. no.	Location	Parameters							
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Cr. (mg/l)	Ni (mg/l)	Zn (mg/l)	Fe (mg/l)	Pb (mg/l)
1	Puli adjoining M/s H.B Industry Unit-II, Raowali, Pathankot Jalandhar Road.	50	170	62	BDL	BDL	1.26	2.5	BDL
2	Puli at Jalandhar-Maqsudan Road, adjoining DAV Play Ground	140	396	134	BDL	0.26	0.58	2.70	BDL
3	Puli at Basti Peer Dad-Leather Complex Road, adjoining Julka Rubber Industry.	98	280	110	BDL	BDL	0.63	2.20	BDL
4	Puli at Athaula Gazipur Road near Karyana Store.	112	310	128	1.22	BDL	0.42	5.17	BDL
5	Puli at Kapurthala -Kala Sangha Road near Gurudwara Tahli Sahib.	106	290	104	0.60	BDL	0.23	2.55	BDL
6	Puli at Billi-Khanpur Road.	168	472	178	1.42	0.13	0.84	6.46	BDL

9.1.19.4 Kala Singhian drain monitoring data (Sep, 2019)

Sr. no.	Location	Parameter							
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Cr. (mg/l)	Ni (mg/l)	Zn (mg/l)	Fe (mg/l)	Pb (mg/l)
1	Puli adjoining M/s H.B Industry Unit-II, Raowali, Pathankot Jalandhar Road.	16	46	38	BDL	BDL	0.29	5.06	BDL
2	Puli at Jalandhar-Maqsudan Road, adjoining DAV Play Ground.	140	400	218	0.23	0.47	3.00	11.4	BDL
3	Puli at Basti Peer Dad-Leather Complex Road, adjoining Julka Rubber Industry.	90	236	148	0.27	0.55	2.87	12.3	BDL
4	Puli at Athaula Gazipur Road near Karyana Store.	110	296	290	1.83	0.22	1.88	11.5	BDL
5	Puli at Kapurthala -Kala Sangha Road near Gurudwara Tahli Sahib.	236	586	486	1.64	0.16	1.04	8.61	BDL
6	Puli at Billi-Khanpur Road.	150	480	610	6.07	1.64	7.36	17.8	BDL

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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 (MLD)	Capacity
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	

9.2.2 Performance of Existing STPs (Jan, 2018 to June, 2018)

Sr No.	Name of STP	Capacity (MLD)	Jan 2018 to June 2018 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-coli (MPN / 100ml)
1	Pathankot	27	-	-	-
2	Shri Hargobinpur	1	12	18.0	1700
3	Dasuya	4	26	24	1440
4	Mukerian	5	8	14	530
5	Sham Churasi	1	34	22	1400
6	Tanda	4	9	-	355
7	Begowal	2.5	-	-	-
8	Bhulath	4	-	40	-
9	Kapurthala	25	36	49	1683
10	Sulthanpur Lodhi	2.6	29	-	1867

The monitoring data, prepared by PPCB, indicate that out of total 7 STPs monitored for the period Jan, 2018 to July, 2018, 29% STPs were complying with all the three parameters namely BOD, TSS and F.coli, 86% of STPs are complying with the norms of TSS parameter and 71% of STPs were complying with the norms of BOD parameter and 29% STPs were found complying with the norms of F.coli parameter.

9.2.3 Performance of existing STPs (July, 2018 to Dec, 2018)

Sr No.	Name of STP	Capacity (MLD)	July 2018 to December 2018 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-coli (MPN / 100ml)
1	Pathankot	27	126	252	28500
2	Shri Hargobinpur	1	35	46	5500
3	Dasuya	4	17	25	1867
4	Mukerian	5	16	27	723
5	Sham Churasi	1	112	77	13433
6	Tanda	4	12	14	910
7	Begowal	2.5	9	24	770
8	Bhulath	4	32	39	2400
9	Kapurthala	25	39	56	28350
10	Sulthanpur Lodhi	2.6	30	46	4233

The monitoring data, prepared by PPCB, indicate that out of total 10 STPs monitored during July, 2018 to Dec, 2018, 30% of STPs were found complying with all the parameters namely BOD, TSS and F.coli parameters,

50% of STPs were complying with the norms of BOD parameter and 90% STPs were complying with the norms of TSS parameter and only 30% of STPs were complying with the norms of F.coli parameter.

9.2.4. Performance of existing STPs (Jan, 2019 to June, 2019)

Sr No.	Name of STP	Capacity (MLD)	Jan 2019 to June 2019 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-coli (MPN / 100ml)
1	Pathankot	27	88	163	12633
2	Shri Hargobinpur	1	24	38	14117
3	Dasuya	4	26	30	7640
4	Mukerian	5	11	19	778
5	Sham Churasi	1	62	112	61500
6	Tanda	4	10	22	538
7	Begowal	2.5	8	19	587
8	Bhulath	4	22	33	11320
9	Kapurthala	25	36	49	5980
10	Sulthanpur Lodhi	2.6	32	37	14883

The monitoring data, prepared by PPCB, indicate that out of total 10 STPs monitored during Jan, 2019 to June, 2019, 30% of STPs were found complying with norms of the parameters namely BOD, TSS and F.coli, whereas, 60% of STPs were found complying with BOD parameter, 80% of STPs were found complying with TSS parameter and 30% STPs were complying with the norms of F.coli parameter.

9.2.5 Performance of Existing STPs (July, 2019 to Sep, 2019)

Sr. No.	Name of the STP	Cap	July, 2019 to September, 2019 (Average)		
			Parameters		
			BOD (mg/l)	TSS (mg/l)	F-Coli (MPN/100 ml)
1	Pathankot	27	121	155	138667
2	Sri Hargobindpur	1	23	27	6400
3	Dasuya	4	22	39	4007
4	Mukerian	5	9	19	763
5	Sham Churasi	1	84	135	132333
6	Tanda	4	13	21	727
7	Begowal	2.5	9	13	367
8	Bhulath	4	23	30	10273

9	Kapurthala	25	22	30	2033
10	Sultanpur Lodhi	2.6	32	45	11400

The monitoring data, prepared by PPCB, for the period July, 2019 to Sep, 2019, indicate that 30% STPs are complying with the parameters namely, BOD, TSS and F.coli, 70% of STPs are complying with the norms of BOD parameter, 80% STPs are complying with the norms for TSS parameter and 30% STPs are complying with F.coli parameter.

9.2.6 Water quality of river Beas

The monitoring data, maintained by the regulatory body, from January, 2018 to June, 2018 and September, 2018 to October, 2018, were compared with the data for the period January, 2019 to June, 2019 and September, 2019. These data are mentioned as under:

9.2.6.1 Water quality data of River Beas (January 2018 to June 2018)

Sr. no.	Location	Parameters					
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)	DO (mg/l)
1	Beas at Talwara H/W	BDL	9.2	10	88.5	54	7.9
2	Beas at Mirthal Bridge Gurdaspur	1.2	14	18	173	123	7.5
3	U/S Pathankot	1	12	19	185	126	7.6
4	D/S Pathankot	1.4	16	22	295	208	7.2
5	Beas 1km D/S effluent discharge point at Mukerian	2	21	29	443	282	6.9
6	Beas Bridge at village Bheate Patan Tehsil Batala Distt. Gurdaspur	1.3	14	20	1100	790	7.2
7	Beas at G.T. Road, under Bridge Near Kapurthala	1.4	15	29	230	132	7.3
8	U/s Goindwal	1.2	14	22	200	118	7.5
9	D/s Goindwal	1.5	16	27	243	155	7.2
10	Beas at Harike	1.5	16	19	347	187	7.9

9.2.6.2 Water quality data of River Beas (September 2018 to December 2018)

Sr. no.	Location	Parameters					DO (mg/l)
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)	
1	Beas at Talwara H/W	1	8	46	93	46	7.7
2	Beas at Mirthal Bridge Gurdaspur	1.2	10	46	172	118	7.7
3	U/S Pathankot	1.4	13	63	382	192	7.5
4	D/S Pathankot	1.8	17	62	612	357	7.4
5	Beas 1km D/S effluent discharge point at Mukerian	1.9	17	61	872	485	7.3
6	Beas Bridge at village Bheate Patan Tehsil Batala Distt. Gurdaspur	1.8	16	57	700	445	7.3
7	Beas at G.T. Road, under Bridge Near Kapurthala	1.5	15	65	505	332	7.4
8	U/s Goindwal	1.4	13	56	460	292	7.6
9	D/s Goindwal	1.6	15	63	545	342	7.6
10	Beas at Harike	1.4	13	57	490	360	7.5

9.2.6.3 Water quality data of River Beas (January 2019 to June 2019)

Sr. no.	Location	Parameters					DO (mg/l)
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)	
1	Beas at Talwara H/W	1	7	12	79	37	8.3
2	Beas at Mirthal Bridge Gurdaspur	1.1	9	14	116	57	8.7
3	U/S Pathankot	1.1	10	18	187	118	8.6
4	D/S Pathankot	1.4	13	23	570	303	8.3
5	Beas 1km D/S effluent discharge point at Mukerian	1.8	16	25	758	422	7.9
6	Beas Bridge at village Bheate Patan Tehsil Batala Distt. Gurdaspur	1.5	13	24	418	273	8
7	Beas at G.T. Road, under Bridge Near Kapurthala	1.4	15	30	493	303	8.5
8	U/s Goindwal	1.3	13	29	370	188	8.6
9	D/s Goindwal	1.4	14	31	407	210	8.3
10	Beas at Harike	1.3	12	31	360	213	8.3

9.2.6.4 Water quality of River Beas (Sep, 2019)

Sr. no.	Location	Parameter					
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)	DO (mg/l)
1	Beas at Talwara H/W	BDL (<1)	7	10	84	46	7.5
2	Beas at Mirthal Bridge Gurdaspur	BDL (<1)	10	11	94	49	7.8
3	U/S Pathankot	BDL (<1)	9	11	110	70	7.8
4	D/S Pathankot	1.2	13	20	540	350	7.3
5	Beas 1km D/S effluent discharge point at Mukerian	1.2	12	24	540	350	7.7
6	Beas Bridge at village Bheate Patan Tehsil Batala Distt. Gurdaspur	1.0	10	18	350	220	7.9
7	Beas at G.T. Road, under Bridge Near Kapurthala	1.3	10	20	540	240	7.5
8	U/s Goindwal	1.1	10	16	220	130	7.2
9	D/s Goindwal	1.0	11	18	280	170	7.6
10	Beas at Harike	1.1	12	18	330	170	7.7

9.2.6.5 Water quality of Holy Bein (Jan, 2018 to June, 2018)

Sr. no.	Location	Parameters				
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)
1	Nanakpur Bridge	2	15	22	272	167
2	Kapurthala P/s	57	222	86	6600	4500
3	Khera Dona Bridge	5	35	34	933	655
4	Gurudwara Sant Ghat	4	25	31	522	230

5	Gurduwara Ber Sahib (Gurdwara Side)	3	27	33	492	285
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9.2.6.6 Water quality of Holy Bein (Sep, 2018 to Dec, 2018)

Sr. no.	Location	Parameters				
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)
1	Nanakpur Bridge	2	13	16	350	175
2	Kapurthala P/s	39	166	74	10075	3375
3	Khera Dona Bridge	4	27	34	698	428
4	Gurudwara Sant Ghat	3	23	24	443	215
5	Gurduwara Ber Sahib (Gurdwara Side)	3	23	24	535	315

9.2.6.7 Water quality of Holy Bein (Jan, 2019 to June, 2019)

Sr. no.	Location	Parameters				
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)
1	Nanakpur Bridge	2	17	18	346	195
2	Kapurthala P/s	40	155	45	10950	4217
3	Khera Dona Bridge	5	30	31	810	427
4	Gurudwara Sant Ghat	4	23	23	435	227
5	Gurduwara Ber Sahib (Gurdwara Side)	4	22	22	462	238

Re

9.2.6.8 Water quality of Holy Bein (Sep, 2019)

Sr. no.	Location	Parameter				
		BOD (mg/l)	COD (mg/l)	TSS (mg/l)	T.Coli (MPN/100 ml)	F.Coli (MPN/100 ml)
1)	Nanakpur Bridge	2.8	16	20	350	170
2)	P/S Kapurthala	50	138	40	17000	4600
3)	Khera Dona Bridge	8.4	32	36	430	280
4)	Gurudwara Sant Ghat	4.2	24	20	350	170
5)	Ber Sahib Gurudwara sultanpur Lodhi (Gurudwara side)	3.9	26	28	350	210

9.2.7 Status of STPs under construction (Beas)

- Presently, no STP is under construction

9.2.8 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, Pathankot	1.2	31.05.2020	DNIT under preparation
5.	Haryana	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		

9.2.9 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	

9.2.10 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	Current status as on 30.9.2019
1.	Sri Hargobind pur	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		

9.2.11 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.	Haryana	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

9.2.12 Irrigation schemes to utilize treated sewage for irrigation

The Department of Soil and Water Conservation has set up irrigation networks for the utilization of treated sewage of the towns where STPs are in operation. The details are mentioned as under:

9.2.12.1 Status of Irrigation schemes for utilization of treated sewage of towns (status as on 31.12.2018)

S.No.	Name of the Town	District	Capacity of STP (MLD)	Command area (hectare)	Status of Completions
1	Sham Chaurasi	Hoshiarpur	1	90	Completed
2	Khichian, Mukerian	Hoshiarpur	5	100	Completed
3	Chak Padayan, Talwara	Hoshiarpur	8	70	Completed
4	Shrihargobindpur	Gurdaspur	1	96	Completed
5	Sultanpur Lodhi	Kapurthala	2.7	100	Completed
6	Bhulath	Kapurthala	4.8	260	Completed

9.2.12.2 Status of irrigation schemes for utilization of treated sewage of the town (status as on 30.9.2019)

S. No.	Name of the Town/STP	District	Capacity of STP	Command area	Date of start of the project	Earlier Status as on 31.12.2018	Current status as on 30.9.2019
1	Kapurthala	Kapurthala	25	484	1.4.2015	Ongoing	Completed
2	Nurmehal	Jalandhar	2.6	105	01-06-2016	Ongoing	Completed
3	Beogwal	Kapurthala	2.6	66	1.2.2012 & 01-05-2019	Ongoing	Shall be completed by 30.11.2019

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

1. 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 33-51% 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, Mallan Wala, Mamdot, Mudki, Mahilpur, Nihal singh wala and Barhi wala 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 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 said department has not submitted any feasibility in this regard.

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 operationize 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 non-compliance 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 Sultanpur Lodhi 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 Budha Nallah before its confluence to river Sutlej (Point No. 9.1.18.1 and 9.1.18.2) but after the mixing of Budha Nallah wastewater with river Sutlej, the quality of river water is degraded due to fall in DO level from 7.5 mg/l to 2.7 mg/l and increase in value of F.Coli parameter from 915 MPN/100ml to 46000 MPN/100ml, 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 with the norms w.r.t. BOD, TSS and F. coli parameters and 86-90% 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/l, 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/l and F-coliforms: 238-315 MPN/100ml. 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, Sujampur 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.

Re

- 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.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) PPCB shall install Real Time Water Quality Monitoring System (RTWQMS) at the appropriate locations by 15.12.2019.

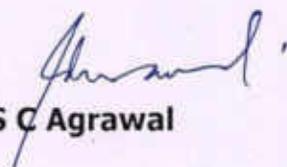


Sant Balbir Singh Seechewal

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**

Item No.04

Court No. 1

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

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

Sobha Singh &Ors.

Versus

Applicant(s)

State of Punjab &Ors.

Respondent(s)

Date of hearing: 16.07.2019

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

For Applicant(s):

Mr. Amber Sachdeva, Advocate

For Respondent (s):

Mr. Anand Kumar Shrivastava, Advocate
for State of Punjab
Mr. ShubhamBhalla, Advocate for PPCB
Mr. A. R. Takkar, Advocate and Ms. Shriya
Takkar, Advocate
Mr. Rajkumar, Advocate for CPCB

ORDER

1. Issue for consideration is pollution of Rivers Satluj and Beas in the State of Punjab and other incidental and allied issues. 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).
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.
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 system, 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.
6. Further reports dated 21. 01. 2019 and 30.01.2019 were filed by the CPCB 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.

7. The Committee has furnished its report dated 12.06.2019 based on its monitoring. The Committee noted as follows:
 - 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 *BudhaNallah* Drain.

8. Apart from the above general observations, the committee has made specific observations about its visit on specific locations. With respect to the visit at *BudhaNallah*, the committee observed:-

- 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 BudhaNallah without any treatment.
- iii) Lot of discharge of waste water(60 MLD) coming from Transport Nagar was found entering into BudhaNallah.
- iv) STP at Bhattian with the capacity of 111MLD 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 BudhaNallah from Dairy Complex, Haibowal.

9. The committee made the following recommendations to remedy the deficiencies noticed above:

“

- 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 cutoff 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."*

10. With respect to sewage/ sullage disposal points into drains leading to Holy Bein the committee made the following recommendations:

- 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, SultanpurLodhi 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."*

11. With respect to the Common Effluent Treatment Plant (CETP) at Leather Complex, Jalandhar the Committee made the following recommendations:

- 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."*

12. The Committee has also made recommendations on the subject of municipal solid waste management at SBS Nagar, STPs at SBS Nagar

stretch along Kala Singian Drain at SultanpurLodhi and NayaNangal. It was noted that M/s Punjab Alkalies& Chemical Ltd., NayaNangal, 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 BudhaNallah. The Municipal Corporation was to remove all the outlets carrying effluents directly into the BudhaNallah. The Committee directed that the STPs of the Municipal Council be monitored by the State PCB. The Committee visited STP at BudhaNallah at BhamianKalan, 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 JagranPrakashan 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 Holy Bein, STP Kapurthala, Bhulana Drain leading to Holy Bein, disposal point into Wadala Drain leading to Holy Bein.

13. The Committee made its further recommendations as follows:

“

- 1) *The observations of the Monitoring Committee with regard to the STPs and industries be conveyed to PPCB, PWSSB, BBMB and M.C NayaNangal 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."

14. 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:

$$EC = (PI \times N \times R \times S \times LF)$$

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

15. 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

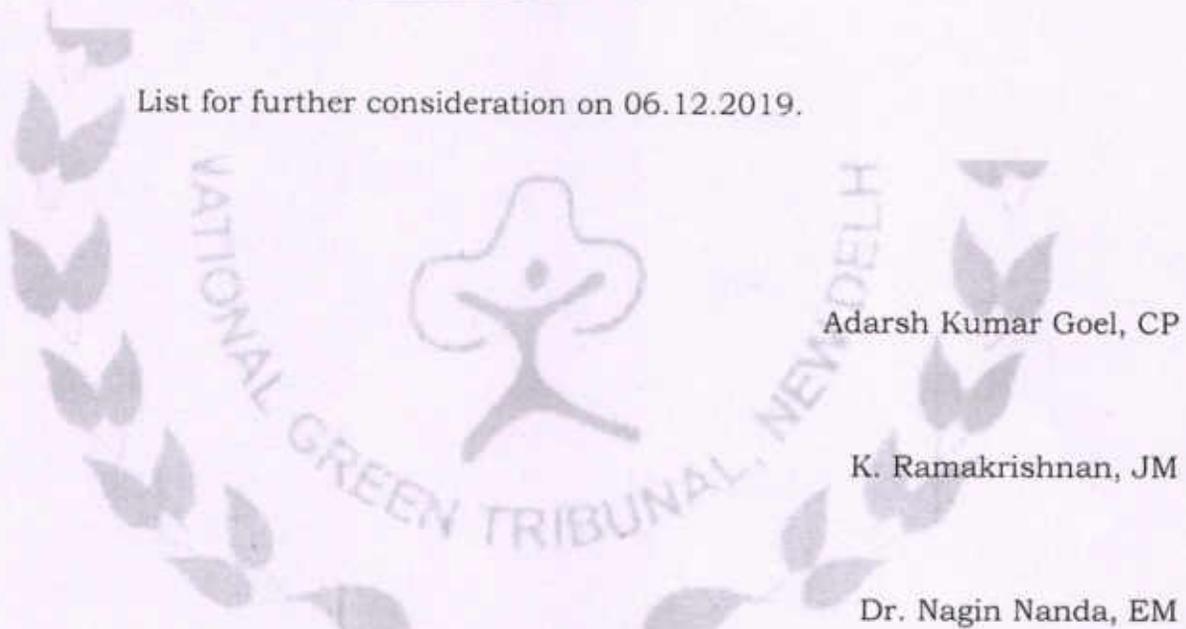
16. The deterrence element should be followed where the default is continuing. Compensation need not be limited to the day on which default is found but should go back to preceding five years unless the polluter establishes that in the past such pollution was not taking place. For doing so, the principle 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

¹The '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.

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.

17. 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.

List for further consideration on 06.12.2019.



July 16, 2019
Original Application No.916/2018
(Earlier O.A. No. 101/2014)
AK

Report on visit to the industries of Ludhiana area on 16.8.2019 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:

Sr. No.	Name and Designation	Designation in the Committee.
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court, Chandigarh.	Chairman
2.	Sh. S.C. Agrawal, Former Chief Secretary, Punjab	Senior Member
3.	Sant Balbir Singh Seechewal	Member
4.	Dr. Babu Ram, Former Member Secretary, PPCB	Member

b) Officers of State Pollution Control Board:-

Sr. No.	Name and Designation
1	Sh. Gulshan Rai, Chief Environmental Engineer, Punjab Pollution Control Board, Ludhiana
2	Sh. Sandeep Behl, Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office, Ludhiana
3	Sh. Paramjeet Singh, Environmental Engineer, Punjab Pollution Control Board, Regional Office-3, Ludhiana
4	Sh. Ashok Kumar Garg, Environmental Engineer, Punjab Pollution Control Board, Ludhiana
5	Sh. Vicky Bansal, Assistant Environmental Engineer, Regional Office-4, Punjab Pollution Control Board, Ludhiana
6	Sh. Bachan Pal, Assistant Environmental Engineer, Regional Office-1, Punjab Pollution Control Board, Ludhiana
7	Sh. Shankar Jeet Singh, Junior Scientific Officer, Ludhiana
8	Sh. Charan Singh, Junior Scientific Officer, Patiala

1.0 M/s Hero Ecotech Limited, Phase-VIII, Mangli, Focal Point, Ludhiana

1.1 Background

The industry is a large scale red category unit and has been granted consent under the provisions of the Water Act 1974 vide no. CTOW/Renewal /LDH4/2019/ 9587030 dated 20.5.2019 valid upto 30.9.2019. The unit is engaged in manufacturing of Bicycle, E-cycle, Medical accessories, Bicycle parts (like fork and frame) @ 3000 numbers/day by using Steel @ 8 TPD as raw material. The manufacturing processes of industry are tube preparation, welding, degreasing, phosphating, powder coating, painting, finishing, assembly and

packing. For the treatment of effluent generated by the industry, it has provided ETP followed by ultra filtration, three stage RO system and Multi Effect Evaporator (MEE).

1.2 Visit to the industry

The monitoring committee visited the industry on 16.08.2019. The industry is engaged in the manufacturing of bicycles and bicycles parts using steel as raw material. The manufacturing processes of the industry are tube preparation, welding, degreasing, phosphating, powder coating, painting, finishing, assembly and packing. The industry discharges trade effluent about 30 m³/day. For the treatment of effluent, it has provided effluent treatment plant (ETP) consisting of physico-chemical treatment followed by ultra-filtration, RO system and MEE.

As claimed by the representative of the industry, about 85-95 % of the RO permeate is being reused in the processes of the industry and about 1-1.5 KLD RO reject is taken into multi-effect evaporator. The condensate of MEE is discharged on to land for plantation. However, it has made provisions for discharge of treated effluent into sewer in case of no demand period. The hazardous sludge generated by the industry is sent to TSDF, Nimbua. **Plate-1** and **Plate-2** show the photographs of sludge generated from physico-chemical treatment and components of ETP of the industry.



Plate-1: Sludge from physico-chemical treatment



Plate-2: Photograph showing the components of ETP

1.2.1 Collection of effluent samples

During visit, the effluent samples from the various points were collected and were sent to Punjab Pollution Control Board Laboratory at Patiala for analysis of the same. The analysis results of these effluent samples received from Punjab Pollution Control Board laboratory (**Annexure-1**) are given as per **Table-1** given below.

Table-1 : Analysis results of the effluent samples

Sr. no.	Point of Sample Collection	Parameters in mg/l except pH								
		pH	TSS	TDS	PO ₄	Ni	T.Cr	Zn	Iron	O & G
1	Collection cum dosing tank	2.19	129	3744	1.0	2.9	0.45	22.8	88.2	4.0
2.	Inlet to settling tank	7.16	486	873	4.7	2.8	0.37	19.5	62.4	2.4
3.	Outlet to settling tank	7.65	72	923	2.9	1.0	BDL	1.1	4.1	1.8
4.	Condensate of MEE	8.36	10	485	0.3	0.23	BDL	BDL	1.3	BDL
5.	Inlet to RO plant	7.65	32	931	3.5	0.99	BDL	1.6	4.5	BDL
6.	RO reject	8.11	18	3651	2.9	1.05	BDL	0.15	1.66	BDL
7.	RO permeate	7.87	9	307	0.5	BDL	BDL	BDL	BDL	BDL

The industry has submitted record regarding ETP meter readings, RO permeate reading, RO reject meter reading from August, 2018 to August, 2019. The record in tabulated form is reproduced as under:

Sr. No.	Month	ETP treated water (KLD)	RO permeate (KLD)	RO reject (KLD)
1.	August, 2018	27.9	26.69	1.2
2.	September, 2018	25.47	24.39	1.08
3.	October, 2018	29.8	28.625	1.2
4.	November, 2018	23.72	22.52	1.2
5.	December, 2018	29.4	28.07	1.34
6.	January, 2019	22.2	21.2	1.0
7.	February, 2019	18.7	17.8	0.95
8.	March, 2019	17.6	16.6	1.07
9.	April, 2019	25.2	23.6	1.5
10.	May, 2019	27.5	26.07	1.44
11.	June, 2019	25.4	24.2	1.15
12.	July, 2019	23.2	22.15	1.07
13.	August, 2019	20.75	19.6	1.08
Average per Day		24.37	23.19	1.17

1.2.1.1 Discussion on the analysis results

The analysis results of the effluent samples collected from various points indicate that the value of pH, TSS, TDS, Phosphate, Ni, T-Crome, Zinc, Iron and O & G were observed as 2.19, 129 mg/l, 3744 mg/l, 1.0 mg/l, 2.9 mg/l, 0.45 mg/l, 22.8 mg/l, 88.2 mg/l and 4.0 mg/l, respectively, at the collection cum dosing tank. The values of these parameters at the inlet to settling tank were observed as 7.16, 486 mg/l, 873 mg/l, 4.7 mg/l, 2.8 mg/l, 0.37 mg/l, 19.5 mg/l, 62.4 mg/l, 2.4 mg/l, respectively, whereas at the outlet of settling tank, these values were found as 7.65, 72 mg/l, 923 mg/l, 2.9 mg/l,

1.0 mg/l, BDL, 1.1 mg/l, 4.1 mg/l and 1.8 mg/l. These values indicate that the concentration of TDS has been reduced at the inlet of settling tank (873 mg/l) and outlet of settling tank (923 mg/l) as compared to the value of TDS in the collection cum dosing tank (3744 mg/l). These facts indicate that the industry has made some hidden mechanism to manage the value of TDS as 873- 923 mg/l (inlet and outlet).

Similarly, in case of the parameters namely zinc and iron, where the values have been found reduced to 1.1 mg/l and 4.1 mg/l, respectively, at the outlet of the settling tank as compared to values of these parameters at the inlet to the settling tank having values as 19.5 mg/l and 62.4 mg/l. Further, at the inlet to the RO system, the values of the parameters namely pH, TSS, TDS, Phosphate, Ni, T-Cr., Zinc, Iron and O & G are 7.65, 32 mg/l, 931 mg/l, 3.5 mg/l 0.99 mg/l, BDL, 1.6 mg/l, 4.5 mg/l and BDL. It means the industry is taking the effluent with low values of TDS as 931 mg/l in RO system. The value of this parameter has been reduced to 307 mg/l in RO permeate and in the RO reject stream, the value of TDS has been found as 3651 mg/l, which is further carried out to MEE. The condensate of MEE has been found containing TDS as 485 mg/l. As informed by the representative of the industry during visit, the condensate of MEE if containing TDS more than 400 mg/l, the same is taken back into the processes of the industry and in case the value of TDS is less than 400 mg/l, the same is utilized for plantation.

1.2 Observations and recommendations

- 1) Physico-chemical treatment is imparted to the effluent generated from its processes and the treated effluent is taken into RO system followed by multi-effect evaporator.**
- 2) Since the industry has provided zero liquid discharge technology, as such, it may not be allowed to discharge its any effluent even condensate generated from MEE into sewerage system. The domestic effluent after treatment may be utilized for plantation within its premises.**
- 3) Chairman PPCB shall depute a team of officers of PPCB in 3rd week of Sep, 2019 to carryout detailed study of the processes of the industry, type and concentration of coagulants / chemicals used for physico-chemical treatment provided by the industry before carrying the primary treated effluent to the RO system for its further treatment. The team shall also verify the quantity of sludge generated from various sources i.e physico-chemical treatment, any other sludge generated within the processes of the industry and residue generated from MEE w.r.t concentration of various parameters in the untreated effluent, amount of coagulants/chemicals used for physico-chemical treatment**

type and concentration of coagulants/chemicals being used for physico-chemical treatment provided by the industry before carrying the primary treated effluent to the RO system for its further treatment. The team shall also verify the quantity of sludge generated from various sources i.e physico-chemical treatment, any other sludge generated within the processes of the industry and residue generated from MEE w.r.t concentration of various parameters in the untreated effluent, amount of coagulants/chemicals used for physico-chemical treatment and TSS removed in the system. Concentration of TDS in the influent, in sludge generated from physico-chemical treatment and in the primary treated effluent may also be analysed.

2) The quantity of sludge generated and quantity of sludge sent to TSDF, Nimbua may also be verified.

3.0 M/s Megaline Enterprises, D-292, Phase-VIII, Focal Point, Ludhiana

3.1 Background

The industry is a medium scale red category unit and has been granted consent under the provisions of the Water Act 1974 vide no. R15LDH4CTOW2650374 dated 02.07.2015 valid upto 30.06.2019. The industry is engaged in the dyeing and washing of garments about 10000 pieces/day for which dyes and chemicals about 150 Kg/day are used as chemicals. It discharges effluent about 900 m³/day.

3.2. Visit to the industry

The monitoring committee visited the industry on 16.8.2019. During visit, the quantity of effluent generation was observed as 31 m³/hr i.e 744 m³/day. For the treatment of effluent, the industry has installed an Effluent Treatment Plant (ETP) consisting of physico-chemical treatment (collection tank, dosing tank, reaction tank and primary settling tank) followed by aerobic biological treatment system. The photographs showing the components of ETP are mentioned as per **plates 3** and 4.



Plate-3: Photograph showing the physico-chemical treatment



Plate-4: Photograph showing the physico-chemical treatment

During visit, it was also observed that the industry has maintained a bye pass system in the sludge pit (from which the liquid sludge is taken to filter press to reduce its moisture content) to bye pass the liquid sludge during odd hours.

3.2.1 Collection of effluent samples

Effluent samples from following points were collected and sent to PPCB laboratory, Patiala for analysis.

- 1) Inlet of ETP
- 2) Final outlet leading to sewer
- 3) Overflow of effluent from sludge pits i.e bye pass of liquid sludge.

The analysis results of the effluent samples received from PPCB laboratory (**Annexure-2**) are mentioned in **Table-2**

Table-2: Analysis results of effluent samples

Sr. no.	Parameters in mg/l except pH & SAR	Points of sample collection				Prescribed standards
		Inlet of ETP	Final Outlet leading to sewer	Overflow of sludge pit	Aeration Tank	Parameters in mg/l except pH & SAR
1	pH	8.06	7.90	7.9	-	6.5-8.5
2.	TSS	164	27	203	-	100
3.	TDS	1340	1908	1446	-	2100
4.	COD	170	34	93	-	250
5.	BOD	58	12	35	-	30
6.	Ammonical Nitrogen as N	2.8	BDL	-	-	50
7.	T.Cr.	BDL	BDL	-	-	2.0
8.	SAR	3.38	3.41	-	-	26
9.	Sulphide	1.6	BDL	-	-	2.0
10.	Phenolic compound	BDL	BDL	-	-	1.0
11.	Oil & Grease	BDL	BDL	-	-	10
12.	Bio -Assay	-	90% survival of fish in 100 % effluent after 96 Hrs	30% survival of fish in 100 % effluent after 96 Hrs	-	-
13.	MLSS	-	-	-	1540	-

3.2.1.1 Discussion on the analysis results

- 1) The analysis result reveals that the concentration of parameters namely pH-8.06, TSS-164 mg/l, TDS-1340 mg/l, COD-170 mg/l, BOD-58 mg/l, Ammonical Nitrogen as N-2.8 mg/l , T.Cr.- BDL, SAR-3.38, Sulphide-1.6 mg/l, Phenolic compound- BDL and oil & grease-BDL were found at the inlet of ETP. At the final outlet, the values of these parameters were observed as pH-7.90, TSS-27 mg/l,

TDS-1908 mg/l, COD-34 mg/l, BOD-12 mg/l, Ammonical Nitrogen-BDL , T.Cr.-BDL, SAR-3.41, Sulphide-BDL, Phenolic compounds - BDL and Oil & Grease-BDL.

- 2) The analysis results also indicate that the value of BOD found as 58 mg/l in the untreated effluent is non-realistic value because in the cotton textile dyeing effluent, the value of BOD may be much higher. As such, the value of BOD as 58 mg/l in the untreated effluent may not be acceptable. It is mentioned here that in case the industry is generating effluent with low value of BOD then there is no need to provide series of components of ETP as provided by the industry i.e. physico-chemical treatment, aerobic biological treatment and filtration system (activated carbon filter and pressure sand filter). It means the industry may have managed the quality of effluent in the collection tank or streams leading to collection tank by diluting the same with fresh streams. Accordingly, this diluted effluent must have passed through primary settling tank resulting in low value of BOD in the overflow of the sludge pit (BOD : 35 mg/l) situated below the primary tube settler.
- 3) Analysis results of the effluent sample collected from bye pass of sludge pit leading to sewer indicate that the values of TSS – 203 mg/l, BOD – 35 mg/l were found beyond the permissible values of TSS – 100 mg/l and BOD – 30 mg/l.
- 4) Though effluent standards have not been prescribed for bio-assay in case of textile dyeing industry but the analysis results of the effluent samples collected from bye pass of sludge pit indicate that there is 30% survival of fish in 100% effluent after 96 hours, which is much below the permissible value of 90% survival of fish in 100% effluent after 96 hours.

3.3 Observations

- 1) The industry is collecting the primary sludge in liquid form in a pucca pit provided at the bottom of the tube settler which is pumped to the filter press to reduce its moisture contents and to convert the liquid sludge into cake form. However, during visit, it was observed that the industry has maintained an outlet to bypass the liquid sludge from the sludge pit directly to the sewerage system during odd hours.
- 2) The value of BOD in the untreated effluent found as 58 mg/l is non realistic value in case of dyeing effluent. The industry might have managed the quality of effluent in the collection tank or streams leading to collection tank by diluting the same with fresh streams. Accordingly, this diluted effluent might have passed through primary settling tank resulting in low value of BOD in the overflow of the sludge pit (BOD : 35 mg/l) situated below the primary tube settler.

- 3) The analysis results of effluent samples collected from by pass system i.e by pass of liquid sludge indicate that the values TSS (203 mg/l) and BOD (35 mg/l) are beyond the permissible limits.
- 4) No proper air distribution was observed in the aeration tank. The analysis results indicate that the concentration of biomass (MLSS) in the aeration tank was poor (1540 mg/l). The purpose of providing aerobic biological treatment system is defeated when the value of BOD is too low (58 mg/l) and there is least food for the micro organisms for their survival and growth.
- 5) The quantity of sludge generated by the industry was low as compared to its actual generation using required quantity of coagulants/chemicals for physico-chemical treatment of the effluent and TSS removed during the primary treatment.
- 6) The size of the sludge pit is very small. It may be increased appropriately so that even in the worst conditions, it may not overflow.

3.4 Recommendations

In view of the above, the following recommendations are made

- 1) **The Chairman, Punjab Pollution Control Board shall take action for closure of the industry after following due procedure as per the provisions of the Water Act, 1974.**
- 2) **An environment compensation amounting to Rs. 30 lakh may be imposed upon the industry.**
- 3) **Chairman Punjab Pollution Control Board shall take disciplinary action against the concerned Environment Engineer and Assistant Environmental Engineer of the area for not reporting about the by-pass arrangements made by the industry for the discharge of primary sludge directly into the sewerage system instead of passing through filter press and sending the same to TSDF Nimbua.**

3.0 M/s Neelam Dyeing & Printing House, D-327, Phase-VIII, Focal Point, Ludhiana

By The monitoring committee visited the industry on 16.8.2019 at around 12:50 hrs. By seeing the committee, the industry deliberately closed its door from inside and did not open the door inspite of knocking the door so many times. Sh. Vicky Bansal, Assistant Environmental Engineer contacted Sh. Gaurav Arora, the owner of the industry, telephonically twice and asked him to get open the door of the industry to facilitate the committee to visit ETP of the industry.

Text message was also sent to him but in vain. Photographs showing the team making efforts to get open the door of the industry are shown as **plate-5 and 6** as under:



Plate-5: Photograph showing the team making efforts to get open the door of the industry



Plate-6: Photograph showing the team making efforts to get open the door of the industry

Therefore, in spite of every effort made by the committee, the representative of the industry did not open the door of the industry. These facts indicate that the industry deliberately closed the door of the industry just to avoid the entry of the monitoring team within his premises and check the pollution control system, if provided by the industry.

4.1 Recommendations

Monitoring Committee recommends that the Chairman, Punjab Pollution Control Board shall take action for closure of the industry after following due procedure as per the provisions of the Water Act, 1974.

5.0 M/s Aggarwal Scientific Dyers, D-324, phase-8, Focal Point, Ludhiana

5.1 Background

The industry is a small scale red category unit and has been granted consent under the provisions of the Water Act 1974 vide no. R16LDH4CTOW3886314 dated 26.04.2016 valid upto 30.06.2020. The industry is engaged in the processing and dyeing of yarn @2000 kgs/day, dyeing of fabric @ 3000 kgs/day and dyeing fiber @ 1200 kgs/day by using yarn, fiber, fabric , dyes & chemical as raw material.

5.2 Visit to the industry

The industry has been visited on 16.08.2019. During visit it was observed that the industry was not in operation. However, the committee took a round of the industry to check the status of its effluent treatment plant. It was further observed that some of the components of effluent treatment plant of the industry were found rusted and defunct. The photographs showing the components of ETP lying in defunct state are shown as per **plates 7 and 8**.



Plate-7: Photograph showing the components of ETP lying defunct



Plate-8: Photograph showing the components of ETP lying defunct

Therefore, it is true fact that the ETP of industry may not achieve the prescribed standards even in case it is made operational during the functioning of the industry. However, the effluent samples from inlet to ETP / equalization tank of the industry were collected and were sent to Punjab Pollution Control Board lab for analysis. The analysis results of the effluent samples received from PPCB laboratory (**Annexure-3**) are mentioned as per **Table-3** given below.

Table-3: Analysis results of the effluent samples

Sr. no.	Parameters in mg/l except pH	Point of sample collection		
		Inlet/ industry	Equalization tank	of the industry
1)	pH		7.5	
2)	TSS		110	
3)	TDS		1638	
4)	COD		491	
5)	BOD		192	
6)	O & G		BDL	
7)	Phenolic compound		BDL	
8)	Sulphide		2.6	
9)	Ammonical Nitrogen		BDL	
10)	SAR		8.1	
11)	T.Cr.		BDL	

5.2.1 Discussion on the analysis results

- 1) As per the analysis results of the effluent sample, the values of the parameters namely TSS, TDS, COD, BOD, Sulphide and SAR were observed as 110 mg/l, 1638 mg/l, 491 mg/l, 192mg/l, 2.6 mg/l and 8.1. The values of O & G, Phenolic Compound, Ammonical Nitrogen and Total .Cr. were found below detection limit.
- 2) The values of TSS (110 mg/l), COD (491 mg/l), BOD (192 mg/l) and Sulphide (2.6 mg/l) were beyond the permissible values of 100 mg/l, 250 mg/l, 30 mg/l and 2.0 mg/l, respectively.

5.3 Observations

1. Some components of effluent treatment plant were found in defunct state which indicates that the industry does not operate its effluent treatment plant even during normal days of its operation and in case ETP has been operated, it might have given ineffective treatment to the effluent.
2. The analysis results of parameters namely TSS, BOD, COD and Sulphide were found higher than the permissible limits as prescribed by the Punjab Pollution Control Board.

5.4 Recommendations

- 1) **The Chairman, Punjab Pollution Control Board shall take action for closure of the industry after following due procedure as per the provisions of the Water Act, 1974.**
- 2) **An environment compensation amounting to Rs. 20 lakh may be imposed upon the industry.**
- 3) **Chairman Punjab Pollution Control Board shall take disciplinary action against the concerned Environment Engineer and Assistant Environmental Engineer of the area for not reporting about the defunct status of ETP of the industry and not taking any legal action against the industry under the provisions of the Water Act, 1974.**

6.0. M/s JBR Technologies Pvt. Ltd., B-260-261, Phase-VIII, Focal Point, Ludhiana:

6.1. Background:

For the treatment of wastewater from electroplating industries of Ludhiana, Jalandhar, Amritsar and Mohali, a Common Effluent Treatment Plant (CETP) of capacity 0.5 MLD has been installed at Phase-VIII, Focal Point, Ludhiana. The CETP consists of collection tank, iron & grease trap, equalization tank, reaction tanks, primary tube settler, secondary tube settler, clarifier, carbon filter, anion / cation filters, reverse osmosis plant (2 stage), multi effect evaporator and sludge drying beds followed by sludge dryer.

The industries of Ludhiana, Jalandhar, Amritsar & Mohali have joined CETP, Ludhiana and the industries of these areas have become the members of CETP. The effluent from the individual industries is collected through mobile tankers duly fitted with GPS system having its connectivity at CETP site.

It is mentioned here that earlier the capacity of CETP was 300 KLD in the year 2012. However, with complete overhauling of the plant by replacing the old components in the year 2014-15, the capacity was enhanced to 500 KLD.

As per the record of Punjab Pollution Control Board, Regional Office-IV, Ludhiana, number of member units and the effluent increased and lifted from these industries from the year 2010 to June, 2019 is mentioned as under:

S.N.	Period	Effluent lifted per month (in ltr)	No. of member units
1	December, 2010	4374499	551
2	December, 2012	6629881	878
3	December, 2014	10620024	1401
4	December, 2016	11548629	1537
5	May 2017,	12865418	1572
6	June, 2019	12114088	1695

6.2. Visit of CETP by the Monitoring Committee:

The Monitoring committee visited the various components of CETP namely collection tank, iron & grease trap, equalization tank, reaction tanks, primary tube settler, secondary tube settler, clarifier, carbon filter, anion / cation filters, reverse osmosis plant (2 stage), multi effect evaporator and sludge drying beds followed by sludge dryer. The CETP was in operation. The Committee also physically checked the colour of the water generated from RO plant and the same was found almost clear. Photographs showing the untreated effluent collection tanks and sludge generation are mentioned as per **plate-9** to **plate-12**



Plate-9: Photograph showing the untreated effluent being drained from vehicles to the collection pit



Plate-10: Photograph showing untreated effluent collection tank



Plate-11: Photographs showing the sludge being dried in the Sludge Drying Beds



Plate-12: Photographs showing untreated effluent collection tank

6.2.1. Collection of effluent samples:

During the visit of the monitoring committee, the effluent samples from various points were collected and these were sent to PPCB lab for analysis. The analysis results of effluent sample received from PPCB laboratory (**Annexure-4**) are given as per **Table 4** given below:

Table 4 : Analysis results of effluent samples

S.N.	Parameter (mg/l except pH)	Point of sample collection		
		Collection tank	RO Reject	RO permeate
1	pH	1.50	8.40	7.75
2	TSS	380	58	BDL
3	TDS	23197	4467	595
4	Nickel	102	BDL	BDL
5	Total Cr.	258	0.22	BDL
6	Haxa Chrome	-	BDL	-
7	Zinc	400	BDL	BDL
8	Iron	2538	2.24	0.18
9	Oil & Grease	12.8	BDL	BDL

6.2.1.1. Discussion on the analysis results:

The analysis results indicate that the values of pH, TSS, TDS, Nickle, T.Cr., Zinc, Iron & O & G in the untreated wastewater were observed as 1.5, 380 mg/l, 23197 mg/l, 102 mg/l, 258 mg/l, 400 mg/l, 2538 mg/l and 12.8 mg/l, respectively. The values of these parameters in the RO permeate were observed as 7.75, BDL, 595 mg/l, BDL, BDL, BDL, 0.18 mg/l and BDL, respectively. In the RO reject, the values of parameters were pH: 8.40, TSS: 58 mg/l, TDS:4467 mg/l, nickel : BDL, T.Cr. : 0.22 mg/l, H.Cr.: BDL, Zinc: BDL, Iron: 2.24 mg/l and O & G : BDL.

The values of various parameters in the treated effluent i.e RO permeate were within the permissible limits.

6.2.2 Observations:

1. The walls of the collection tank were found corroded, which may become the source of seepage of contaminated effluent.
2. The sludge generated from the tube settler was found spread in the sludge drying beds but no mechanism has been provided to cover the sludge during rainy days.
3. The sludge was being dried in sun, whereas, the sludge thickener and sludge dryer were not in operation.
4. As claimed by the representative of CETP, RO permeate and multi effect evaporator condensate are given to the nearby dyeing industries for its utilization into their processes.
5. The monitoring team checked the functioning of the GPS system and the location of 3 vehicles was checked and the drivers of these vehicles were contacted telephonically and out of these 3 vehicles, the driver of one of the vehicle intimated his location which was found in order. The photographs showing the monitoring team checking GPS system and movement of vehicles displayed on the system are shown in **plates 13** and **14** given below:



Plate-13: Photographs showing monitoring team checking the functioning of GPS system and movement of vehicles displayed on the system

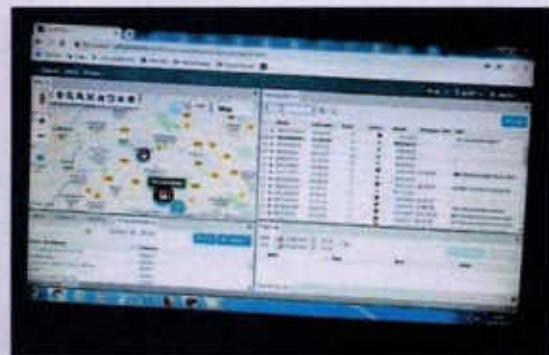


Plate-14: Photographs showing monitoring team checking the functioning of GPS system and movement of vehicles displayed on the system

6.2.3 Recommendations:

1. **The CETP operator should provide impervious lining / rubber lining on the walls of the collection tank to protect these walls from corrosion and avoid seepage of toxic effluent.**
2. **The area of the sludge drying beds may be increased appropriately so as to dry it easily in sunny days. There should be a mechanism of protecting these sludge drying beds containing sludge during rainy days.**
3. **The sludge thickener and sludge dryer should be made operational at all the times to dry the sludge.**

4. Chairman, Punjab Pollution Control Board shall depute a team of officers of Punjab Pollution Control Board to conduct detail study w.r.t quantity of chemicals used for treatment of the wastewater, removal of TSS in the treatment system, residue from MEE and the quantity of dried sludge generated and sent to the TSDF, Nimbua. The team shall also prepare sludge balance statement and submit detailed report to the Board for appropriate action in the matter within one month under intimation to the Chairman of the monitoring committee.
5. The said team shall also verify the compliance of the observations of the monitoring committee which was earlier monitored by the committee in its earlier visit.
6. The industry shall make entire process area as leak-proof. Acid proof floor tiles with adequate slope to collect spillages, if any, into a collection pit, may be provided.
7. The industry shall provide proper personal protective equipments such as masks, safety gloves, goggles, safety shoes etc to the workers / labourer on the job.
8. The industry shall implement remediation measures of contaminated soil / ground water / sediments in case environment damage is occurred during transportation, improper handling of the toxic wastewater, accidental spillage during storage, processing and treatment of the wastewater.
9. The industry shall provide piezometric wells all around the CETP for monitoring the quality of ground water.

7.0. M/s Avon Cycles Ltd., G. T. Road, Ludhiana:

7.1. Background:

Ad
The industry is engaged in the manufacturing of bicycles parts, frame fork and mudguard, e-bike, e-scoot & e-rickshaw parts and assembly of e-bike, e-scoot & e-rickshaw. The raw materials used for manufacturing of the above said products are MS tube and MS strips. The processes involved are machining, debrassing, phosphating and painting.

7.2. Visit to the industry by the monitoring committee:

During visit, the committee observed that the quantity of effluent generated by it is 110 KLD. For the treatment of the said effluent, the industry has installed an effluent treatment plant based on physico-chemical treatment followed by ultra filtration, non filtration and RO system. Photographs showing the different components of ETP are mentioned as per **plate-15**. The rejects from these filters are dried in multi effect evaporator. The permeate of the RO system and

multi effect evaporator condensate are re-used in the processes of the industry. The sludge generated during physico-chemical treatment, after dyeing is stored in a room to further transport to TSDF.

The photograph showing the sludge stored in a room is shown as per **plate-16**. The water meter reading as noted by the committee during the visit to the industry were acidic stream: 2528 KI; Alkaline stream: 59400 KI; Reject line: 1505 KI; Permeate: 167752 KI; MEE condensate: 6112 KI.

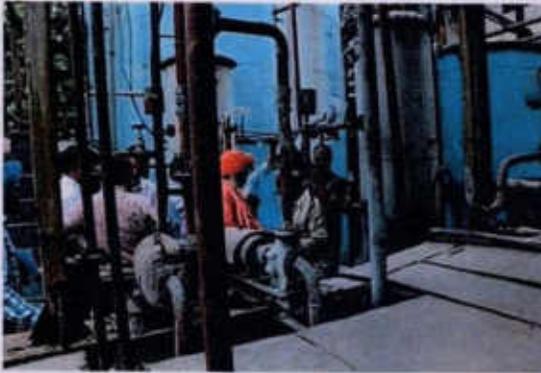


Plate-15: Photograph showing various components of ETP



Plate-16: Photograph showing the sludge stored in the sludge storage room

7.2.1 Collection of effluent sample of the industry:

The monitoring team collected the effluent samples from the various points for analysis of the parameters. These effluent samples were analysed by Punjab Pollution Control Board laboratory (**Annexure-5**) for various parameters, which are mentioned as per **Table-5** given below:

Table 5 : Analysis results of effluent samples

S.N.	Parameter (mg/l except pH)	Point of sample collection						
		Inlet acidic stream	Inlet alkaline stream	After clarification	After filtration unit	RO permeate	RO reject	Drain leading to sewer
1	pH	3.47	9.88	6.83	6.90	5.87	6.56	6.84
2	TSS	738	1380	7	BDL	BDL	280	86
3	TDS	3152	1560	2370	2386	183	12720	814
4	Nickel	0.22	BDL	BDL	BDL	BDL	BDL	BDL
5	T.Chrome	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6	Phosphate	4.1	1.4	1.4	1.0	1.8	1.9	3.6
7	zinc	116	2.62	0.99	0.68	0.25	1.67	0.54
8	Iron	149	10.2	1.03	0.28	0.51	0.47	1.08

7.2.1.1. Discussion on the analysis results:

The analysis indicates that the industry has two streams namely acidic stream and alkaline stream. The values of the parameters namely pH, TSS, TDS, Nickle, T.Cr. Phosphate, Zinc and Iron in these streams have been observed as 3.47, 738 mg/l, 3152

mg/l, 0.22 mg/l, BDL, 4.1 mg/l, 116 mg/l, 149 mg/l and 9.88, 1380 mg/l, 1560 mg/l, BDL, BDL, 1.4 mg/l, 2.62 mg/l and 10.2 mg/l, in acidic and alkaline streams, respectively.

After filtration unit, the values of these parameters were observed to 6.9 , BDL, 2386 mg/l, BDL, BDL, 1.0 mg/l, 0.68 mg/l and 0.28 mg/l. In RO permeate the parameters were observed as pH : 5.87, TSS: BDL, TDS: 183 mg/l, Nickle: BDL, T.Cr: BDL, Phosphate: 1.8 mg/l, Zinc : 0.25 mg/l and iron 0.51 mg/l.

Effluent sample were also collected from the drain leading to sewer and its analysis results show the values of pH= 6.84, TSS= 86 mg/l, TDS=814 mg/l, Nickle : BDL, T.Cr : BDL, Phosphate =3.6 mg/l, Zinc = 0.54mg/l and iron =1.8 mg/l. The analysis results of the drain effluent sample indicate that the industry is discharging its effluent containing phosphate, zinc and iron, whereas such type large scale electroplating / phosphate industries have not been allowed to discharge its effluent into drain/ sewerage system as these industries have provided their individual zero liquid discharge (ZLD) technology.

7.2.2 Observations

1. Though the industry has provided various components for treatment of effluent like physico-chemical treatment followed by filtration unit (ultra filtration, RO system, Nano filtration) and the reject is fed to the multi effect evaporator but these components have been provided at such a height, where it is difficult to check the functioning of these components. Therefore, the industry should make such arrangements so that these components may be easily and safely approachable to the visiting officers.
2. The industry has provided water meter on different streams and the readings of these water meters were noted during the visit but from these readings no conclusions can be drawn with respect to use of fresh water in different streams and the effluent generated from these streams and their physico-chemical treatment followed by filtration units and recycling of the permeate of the filtration units. Therefore, the industry should maintain daily water balance statement for the facilitation of the visiting officer.
3. The analysis results of the effluent samples collected from the drain leading to sewer indicate that the industry may be discharging its effluent into sewerage system whereas the industry is based on ZLD technology and it is not allowed to discharge its trade effluent into sewerage system.

7.2.3. Recommendations

1. **The industry shall ensure that no trade effluent is discharged into drain or sewerage system. All the streams, carrying trade effluent, shall be**

treated through RO system followed by multi effect evaporator. RO permeate and condensate of MEE shall be reused in the processes of the industry and no effluent shall be discharged into sewerage system.

2. The hazardous sludge generated from physico-chemical treatment and MEE residue shall be sent to TSDF and a record in this regard shall be maintained by the industry.
3. Chairman, Punjab Pollution Control Board shall impose an environment composition of suitable amount on "polluter pays" principal as the industry, being large scale electroplating unit, is not allowed to discharge its trade effluent into sewerage system, whereas, it was found discharging its effluent into drain leading to sewer.

8.0. M/s Eveline International, Dhandhari Kalan, G. T. Road, Ludhiana:

8.1. Background:

The Industry is large scale dyeing unit engaged in the manufacturing of dyeing and finishing of knitted fabrics and garments. The raw material used for the manufacturing of the said products are cotton knitted fabric, cotton yarn, wool dyes and chemicals like common salt, soda ash, hydrogen peroxide, dyes, acitic acid and enzymes. The industry has been granted consent under the provisions of the Water Act, 1974 vide no. R14LDH2CTOW1314375 dated 2/6/2014 valid upto 31/3/2019.

8.2. Visit to the industry by the monitoring committee:

The industry was visited by the monitoring committee on 16.08.2019. It discharges effluent about 34.47 m³/hr and for the treatment of the effluent, it has provided an effluent treatment plant consisting of equalization tank, dosing tank, reaction channel, primary settling tank, aeration tank (FAB), secondary tube settler, sand filter, activated carbon filter, ultra filtration and RO system and Mechanical Vapor Recompression (MVR), a pilot project of 125 KLD capacity which is under stabilization.

8.2.1. Collection of effluent samples:

At the time of the visit, the effluent samples from various points as mentioned below were collected by the team.

1. Inlet to ETP.
2. Inlet of tube settler.
3. Outlet of first tube settler.
4. Outlet of second tube settler.

5. RO permeate.
6. RO reject.
7. Outlet before MVR.

These effluent samples were sent to PPCB laboratory for analyses. The analysis results, as received from PPCB laboratory (**Annexure-6**) are given as per **Table-6** given below:

Table 6 : Analysis results of effluent samples

S.N.	Parameter (mg/l except pH & SAR)	Point of sample collection						Permissible limits (mg/l except pH and SAR)
		Inlet to ETP	Outlet of primary tube settler	Outlet of secondary tube settler	RO permeate	RO reject	Outlet before MVR	
1	pH	10.8	8.2	8.1	7.6	8.4	8.9	6.5-8.5
2	TDS	2640	3560	3810	1040	5220	835	2100
3	TSS	120	90	60	BDL	15	30	100
4	COD	240	180	60	BDL	52	48	250
5	BOD	70	52	16	BDL	14	12	30
6	Sulphide	3.2	-	-	-	-	2.8	2.0
7	Phenolic compound	BDL	-	-	-	-	BDL	1.0
8	Ammonical Nitrogen	4.8	-	-	-	-	2.0	50
9	T.Cr.	BDL	-	-	-	-	BDL	2.0
10	SAR	3.49	-	-	-	-	3.25	26
10	O & G	4.2	-	-	-	-	BDL	10

8.2.1.1. Discussion on the analysis results:

The analysis results indicate that parameters in the untreated effluent were observed as pH: 10.8, TDS: 2640 mg/l, TSS: 120 mg/l, COD: 240 mg/l, BOD: 70 mg/l, Sulphide : 3.2 mg/l, Phenolic Compounds : BDL, Ammonic Nitrogen: 4.8 mg/l, T.Cr.: BDL, SAR: 3.49 and O & G : 4.2 mg/l.

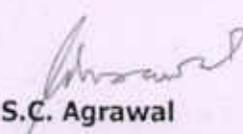
After physico-chemical treatment, the values of the parameter namely pH, TDS, TSS, COD and BOD, respectively, were observed as 8.2, 3560 mg/l, 90 mg/l, 180 mg/l and 52 mg/l.

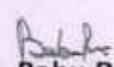
The percentage removal of BOD, COD and TSS by physico-chemical treatment have been observed as 25.7 %, 25 % and 25 %, respectively.

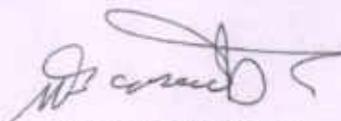
At the outlet of the secondary tube settler i.e. after aerobic bio logical treatment system, the values of parameters were observed as BOD: 16 mg/l, COD: 60 mg/l, TSS: 60 mg/l and TDS: 3810 mg/l. In RO permeate, the values of COD, BOD and TSS were below detection limit and the value of TDS was 1040 mg/l. The values of the parameters in RO reject were observed as pH : 8.4, TDS: 5220 mg/l, TSS: 15 mg/l, COD: 52 mg/l, BOD: 14 mg/l.

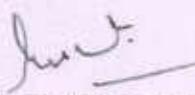
8.2.2. Observations & Recommendations

- 1) The industry has installed Mechanical Vapor Recompression (MVR) but the same was not in operation and under stabilization.
- 2) The industry is maintaining low level of BOD : 70 mg/l at the inlet of ETP by diluting it with RO reject having very low values of BOD : 14 mg/l, whereas RO reject stream would have been taken into MEE, if it would have been provided by the industry. The resultant value of TDS at the inlet of ETP has been found as 2640 mg/l. Had the industry not mixed RO reject stream with inlet stream, the values of the BOD and COD would have been much more as compared to the present values of these parameters as 70 and 240 mg/l. Thus, the industry has taken advantage of mixing these streams but has increased the value of TDS to 2640 mg/l. As per record of PPCB, the industry is mixing its RO reject stream with untreated effluent (influent stream) to reduce the values of BOD and COD in the influent collection tank for the last more than one year, whereas, the industry should have installed Multi Effect Evaporator (MEE) to evaporate the RO reject. Now, it has installed MVR, a pilot project of 125 KLD as ZLD system. This system also requires multi effect evaporator for drying the MVR residue.
- 3) Punjab Pollution Control Board shall check the record of the industry to confirm as to whether it has allowed the industry to recycle its RO reject, whereas, it is not advisable to recycle RO reject containing high level of TDS as 5220 mg/l.
- 4) Chairman, Punjab Pollution Control Board shall depute Environment protection squad to make surprise visit of the industry and the said team shall carryout comprehensive study with respect to all the parameters and all the components of ETP, UF and RO system, their treatment efficiencies, water balance statement, sludge generation & its management and characteristics of the parameters in the final effluent discharged into sewerage system or onto land for plantation.


S.C. Agrawal


Dr. Babu Ram


Sant Balbir Singh
Seechewal


Justice Pritam Pal,
Former Judge,
Punjab & Haryana High Court,
(Chairman of Monitoring Committee)

Annexure - 1²⁹³
Ten

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 26-32
Dated 26.8.2019

I hereby certify that I Kiran Jasuja, 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 17th day of August, 2019 from Er. Gurkaran Singh, AEE, samples of M/s Hero Ecotech Limited, Phase-VIII, Mangli, Focal Point, Industrial Area, 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 17.08.2019 to 26.08.2019 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 India Standard Methods of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as follows

Point of sample collection: - As per data Sheet.

Parameters	Collection cum dosing tank	Inlet to settling tank	Outlet of settling tank	Condensate of MEE	Inlet to RO Plant	RO Reject	RO Pretrate
pH	2.19	7.16	7.65	8.36	7.65	8.11	7.87
Total Suspended Solids mg/l	129	486	72	10	32	18	9
Total Dissolved Solids mg/l	3744	873	923	485	931	3651	307
Phosphate mg/l	1.0	4.7	2.9	0.3	3.5	2.9	0.5
Nickel mg/l	2.9	2.8	1.0	0.23	0.99	1.05	BDL
Total Chrome mg/l	0.45	0.37	BDL	BDL	BDL	BDL	BDL
Zinc mg/l	22.8	19.5	1.1	BDL	1.6	0.15	BDL
Iron mg/l	88.2	62.4	4.1	1.3	4.5	1.66	BDL
Oil & Grease mg/l	4.0	2.4	1.8	BDL	BDL	BDL	BDL

Note: 1) All the results are in mg/l except pH.
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 26th day of August, 2019

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

m 25635
26/8/2019

Kiran Jasuja
(Signature) *26/8/19*
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-IV, Ludhiana

Authorisation Letter No.-

Dated -

Endst No. *25636-37*

dt. *26/8/2019*

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-II, Ludhiana.

Kiran Jasuja
(Signature) *26/8/19*
State Board Analyst

POLLUTION CONTROL BOARD VATAVARAN BHAVAN,
NABHA ROAD, PATIALA
WATER ANALYSIS REPORT



- | | |
|--|---|
| 1. Laboratory Sample No. | E-855-858/ H.O.Lab. Monitoring/2019 |
| 2. ULR No. | ULR-TC70451800000001295P |
| 3. Name of Industry | M/s Megaline Enterprises, D-292, Phase-8,
Focal Point, Ludhiana. |
| 4. Name of Sample collecting Officer | Er.Satyajeet Singh Attri, AEE |
| 5. Designation of the officer authorizing Test | Environmental Engineer, Regional Office, Ludhiana-II |
| 6. Type of Sample | Grab |
| 7. Date & Time of Sample collection | 16.08.2019 |
| 8. Date & Time of Sample receipt in Lab. | 17.08.2019 |
| 9. Period of Analysis | 17.08.2019 to 26.8.2019 |
| 10. Test Methods | As per relevant parts of IS:3025/& Methods of APHA |

Results

Sr. No.	Parameters	Inlet of ETP	Final Outlet leading to sewer	Overflow of sludge pit	Aeration Tank
1.	pH	8.06	7.90	7.9	-
2.	Total Suspended Solids mg/l	164	27	203	-
3.	Total Dissolved Solids mg/l	1340	1908	1446	-
4.	Chemical Oxygen Demand mg/l	170	34	93	-
5.	Bio-chemical Oxygen Demand mg/l	58	12	35	-
6.	*Ammonical Nitrogen as N mg/l	2.8	BDL	-	-
7.	Total Chromium mg/l	BDL	BDL	-	-
8.	*Sodium Absorption Ratio	3.38	3.41	-	-
9.	*Sulphide mg/l	1.6	BDL	-	-
10.	*Phenolic Compound mg/l	BDL	BDL	-	-
11.	*Oil & Grease mg/l	BDL	BDL	-	-
12.	*Bio-Assay	-	90% Survival of fish in 100% effluent after 96Hrs	30% Survival of fish in 100% effluent after 96Hrs	-
13.	*Mixed Liquid Suspended Solids mg/l	-	-	-	1540

* Not covered under scope of NABL

Note: BDL means below detection limit

--End of Report--

Analyzed by *Amul*
Endst. No: *26/8/2019 Q5870-72**M. Pranshu*
Scientific Officer
Dt. *28/8/2019*

A copy of the above is forwarded to the:-

- ✓ 1. The Member State Level Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali.
2. The Senior Environment Engineer, Punjab Pollution Control Board, Zonal Office-I, Ludhiana
3. The Environment Engineer, Punjab Pollution Control Board, Regional Office, Ludhiana-II

Amul
Asstt. Scientific Officer
26/8/2019

PUNJAB POLLUTION CONTROL BOARD
 Regional Office No. 2, E-648-B, 3rd Floor, Phase-5, Focal Point,
 Ludhiana.

DETAILS OF EFFLUENT SUPPLIED FOR THE COLLECTION OF SAMPLE

PART-A

1. Name & Address of Industry: *Mc Megaline Enterprises,
D-292, Phase 5, Focal Point Ludhiana*
2. Raw material used: *Cotton garment*
3. i. Product: *Dyed Garments*
 ii. Processes involved: *R.M. → Washing/dyeing → Product*
4. i. Give the names of the processes in operation at the time of sampling: *All were in operation*
 ii. The number of wastewater streams from different processes along with discharge rate of each: *number of streams ready to 3*
5. i. Quantity of industrial effluent discharge per hour (in liters) per day: *31 m³/hr 4579.4 m³/day*
 ii. Is the discharge of industrial effluent continuous, intermittent and its time of its discharges: *About continuous*
 iii. Is the quantity and quality of industrial effluent from different streams uniform through out: *Almost uniform*
 iv. Present method of disposal of industrial effluent: *Into Sewer*
6. i. Working hours: *24 hours*
 ii. Closed day: *As & when required*
7. Number of outlets through which industrial effluent is discharged outside the industry: *Into Sewer*
8. Name of the occupants/representative of the industry with designation present at the time of sampling: *Sh. Suresh Verma (Prop)*
9. Process not working at the time of sampling & why? *E-555 Allowed in operation*
10. Parameters to be analysed: *Inlet Outlet Sludge (10 days)*
11. Sample preserved for (in days): *IBA - OBA - BBA pH, TSS, BOD, etc.*
 - i. Organic parameters (freezer below 4°C): *IB2 - OB2 - COD, Ammonia, etc.*
 - ii. Metals (pH less than 2 with HNO₃): *IB3 OB3 - Cu, Fe, etc.*
 - iii. Cyanide (pH above 10 with NaOH): *IB4 OB4 - Sulphides*
 - iv. Oil & grease (in 1 L.L. sample glass bottles & freezer): *IB5 OB5 - Phenolic compounds*
 - v. Others: *IB6 OB6 - oil & grease*
IB7 OB7 - BBA - BOD
E-558 + ABA MLSS from Aeration tank

12. Details visual record of Water & Air Clear weather

13. i. Name the components of the ETP which were working.
Eg: Flocculation → Filtration → Aeration tank → Secondary clarifier
↓
Sedimentation ↓
Filter press ↓
Sludge → Sludge pit → Sludge
Sludge → Sludge pit → Sludge

ii. If any component was not working why? Allow in operation

14. Date & time of collecting the sample 16-8-2019 12:15 PM Onwards

15. Temperature in °C
a) Air/Sample Aeration tank - Slight turbid
Inlet - Turbid

16. Colour and odour of the sample
Outlet - Colourless
Off Sludge pit - Turbid

17. Type of sample collected grab or composite. Grab

18. Point of sample collection
1 - Inlet - Inlet of ETP
2 - Outlet - Final outlet leading to Sewer
3 - Off Sludge pit - Overflow of Sludge pit

19. Remarks:-

The ETP was in operation. The treated effluent was being discharged into the sewer. The industry was having Sludge pit for underflow of Clarifier. The sludge pit was having an opening which was not covered and effluent was flowing towards the final outlet leading to sewer. Sample of this overflow was also collected.

NOTE:-

i. The samples of trade effluent of M/s _____

Sr. No. _____ above was collected in _____ from the point mentioned at _____ in the presence of _____ occupier _____ representative of the industry/placed in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to them. No request to send the sample to the State Water Laboratory under section 52 (I) if the said Act has been made by occupier/representative of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed _____ hearing inscription of AEE. _____

- 1) Sh. Sunita Devi (Prop) 3) _____
- 2) Sh. Sunita Devi (AEE) 4) _____

Signature of the occupier/representative of the Industry with Designation _____

Sunita Devi
16/8/19
Signature of the Officer official collecting the sample AEE

Received sealed/unsigned and preserved sample on _____ at _____ through Sh. _____

BOARD ANALYST

Annexure-3

PUNJAB POLLUTION CONTROL BOARD VATAVARAN BHAVAN, NABHA ROAD, PATIALA WATER ANALYSIS REPORT



1. Laboratory Sample No. E 854/ H.O.Lab. Monitoring/2019
2. ULR No. TC704518000000001295P
3. Name of Industry M/s Aggarwal Scientific Dyers D-324 Phase 8, Focal Point Ludhiana
4. Name of Sample collecting Officer Er. Satyajeet Singh, AEE
5. Designation of officer authorizing Test EE, RO-2 Ludhiana
6. Type of Sample Grab
7. Date & Time of Sample collection 16.8.2019
8. Date & Time of Sample receipt in Lab. 17.8.2019
9. Period of Analysis 17.8.19 to 22.8.19
10. Test Methods As per relevant parts of IS:3025/Method of APHA

Results

Sr. No.	Parameters	Inlet/Eq tank of the Industry
1	pH	7.5
2	Total Suspended Solids mg/l	110
3	Total Dissolved Solids mg/l	1638
4	Chemical Oxygen Demand mg/l	491
5	Bio-chemical Oxygen Demand mg/l	192
6	*Oil & grease mg/l	BDL
7	*Phenolic Compounds mg/l	BDL
8	*Sulphide mg/l	2.6
9	*Ammonical Nitrogen mg/l	BDL
10	*Sodium Absorption ratio	8.1
11	Total Chrome mg/l	BDL

*Not covered under the scope of NABL.

Note: BDL means below Method detection limit

---End of Report---

Analyzed by

M. Singh
22/8/19

Scientific Officer

[Signature]

22/8/19

Endst. No: 25802-03

o/c

Dt. 27-8-19

A copy of the above is forwarded to the:-

1. The Senior Environment Engineer, Punjab Pollution Control Board, Zonal Office Ludhiana
2. The Environment Engineer, Punjab Pollution Control Board, Regional Office-II Ludhiana

Jr. Scientific Officer

[Signature]
22/8/19

o/c

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 39-41

Dated 22.8.2019

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 17th day of August, 2019 from Er. Gurkaran Singh, AEE, samples of M/s JBR Technologies Ltd., D-260-61, Focal Point, Phase-VIII, Ludhiana (CETP) for analysis. The samples were in a condition fit for analysis reported below:-

I further certify that I have analysed the aforementioned samples from 17.08.2019 to 22.08.2019 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 India Standard Methods of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as follows

Point of sample collection: - As per data Sheet.

Parameters	Collection tank	RO Reject	RO Permeate
pH	1.50	8.40	7.75
Total Suspended Solids mg/l	380	58	BDL
Total Dissolved Solids mg/l	23197	4467	595
Nickel mg/l	102	BDL	BDL
Total Chrome mg/l	258	0.22	BDL
Hexa Chrome mg/l	-	BDL	-
Zinc mg/l	400	BDL	BDL
Iron mg/l	2538	2.24	0.18
Oil & Grease mg/l	12.8	BDL	BDL

- Note : 1) All the results are in mg/l except pH.
2) Entire sample was consumed in Testing.

The condition of the seals, fastening and container on receipt was as follows:-

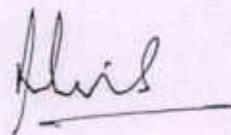
Seals & fastenings of the container were found intact.

Signed this 22nd day of August, 2019

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

no 25639
26/8/2019



(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-IV, Ludhiana

Authorisation Letter No.-

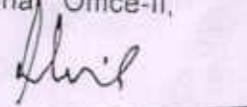
Dated -

Endst No 25640-41

dt 26/8/2019

A copy of the above is forwarded to the:

1. Sr. Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana.
2. The Member, State Level Executive Committee, Chandigarh.



(Signature)
State Board Analyst

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 19-25

Dated 22.8.2019

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 17th day of August, 2019 from Er. Gurkaran Singh, AEE, samples of M/s Avon Cycle Ltd., G.T. Road, 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 17.08.2019 to 22.08.2019 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 India Standard Methods of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as follows

Point of sample collection: - As per data Sheet.

Parameters	Inlet Acidic stream	Inlet Alkaline stream	After Clarifier	After filtration unit	RO permeate	RO Reject	Drain leading to sewer
pH	3.47	9.88	6.83	6.90	5.87	6.56	6.84
Total Suspended Solids mg/l	738	1380	7	BDL	BDL	280	86
Total Dissolved Solids mg/l	3152	1560	2370	2386	183	12720	814
Nickel mg/l	0.22	BDL	BDL	BDL	BDL	BDL	BDL
Total Chrome mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phosphate mg/l	4.1	1.4	1.4	1.0	1.8	1.9	3.6
Zinc mg/l	116	2.62	0.99	0.68	0.25	1.67	0.54
Iron mg/l	149	10.2	1.03	0.28	0.51	0.47	1.08

- Note : 1) All the results are in mg/l except pH.
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 22ND day of August, 2019

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

25642
26/8/2019

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-II, Ludhiana

Authorisation Letter No.-

Endst No. 25643-44

Dated -

dt. 26/8/2019

A copy of the above is forwarded to the:

1. Sr. Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Ludhiana.
2. The Member, State Level Executive Committee, Chandigarh.

(Signature)
State Board Analyst

Ten

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 26-32
Dated 26.8.2019

I hereby certify that I Kiran Jasuja, 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 17th day of August, 2019 from Er. Gurkaran Singh, AEE, samples of M/s Hero Ecotech Limited, Phase-VIII, Mangli, Focal Point, Industrial Area, 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 17.08.2019 to 26.08.2019 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 India Standard Methods of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as follows

Point of sample collection: - As per data Sheet.

Parameters	Collection cum dosing tank	Inlet to settling tenk	Outlet of settling tank	Condensate of MEE	Inlet to RO Plant	RO Reject	RO Premeate
pH	2.19	7.16	7.65	8.36	7.65	8.11	7.87
Total Suspended Solids mg/l	129	486	72	10	32	18	9
Total Dissolved Solids mg/l	3744	873	923	485	931	3651	307
Phosphate mg/l	1.0	4.7	2.9	0.3	3.5	2.9	0.5
Nickel mg/l	2.9	2.8	1.0	0.23	0.99	1.05	BDL
Total Chrome mg/l	0.45	0.37	BDL	BDL	BDL	BDL	BDL
Zinc mg/l	22.8	19.5	1.1	BDL	1.6	0.15	BDL
Iron mg/l	88.2	62.4	4.1	1.3	4.5	1.66	BDL
Oil & Grease mg/l	4.0	2.4	1.8	BDL	BDL	BDL	BDL

- Note : 1) All the results are in mg/l except pH.
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 26th day of August, 2019

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

Kiran Jasuja
(Signature) 26/8/19
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-IV, Ludhiana

Authorisation Letter No. -

Dated -

Endst No. 25636-37

dt. 26/8/2019

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-II, Ludhiana.

Kiran Jasuja
(Signature) 26/8/19
State Board Analyst

26-32

PUNJAB POLLUTION CONTROL BOARD

Notice of intention to have sample analysed under section 21 of the Water (Prevention & Control of Pollution) Act, 1974.

(The See Sub-Rule 28)

To

M/s. Hemo Gorkun Limited

Phase - VII, Margoli

Phase - VII, Industrial Area

Ludhiana - 141010

I hereby give notice that I am intended to have analysed the sample of water/sewage/trade effluent which is being taken today the 16th Day of August 2019 form (1)

Streams specified in the

date sheet.

Gurkeeran Singh
(AEE)

Name and designation of the Person who takes the sample

(1) Here specify the stream, well plant vessel or place form where the sample is taken

Sh. Sunil Kumar
DGM (HRE Admin)
Name and designation of the Person receiving the notice

Streams specified in the date sheet


(SUNIL KUMAR)
DGM.

PUNJAB POLLUTION CONTROL BOARD

Head office, Vatavaran Bhawan
Nabha Road, Patiala

DETAILS TO BE SUPPLIED FOR THE COLLECTION OF SAMPLE

PART-A

- M/s Hero Ecotech Limited
1. Name & Address of the industry
Phase-VIII, Mangli, focal point,
Industrial Area, Ludhiana-141010
 2. Raw material used
Steel Pipes, Phosphating chemicals etc.
 3. I. Product
Bicycle
 - II. Processes involved
Raw Material - Machining - Degreasing -
Phosphating - Painting - Assembly - inspection.
 4. I. Give the name of the processes in operation at the time of sampling
All in operation
 - II. The number of wastewater streams from different processes along with discharge of each.
One, processing area
 5. I. Quantity of industrial effluent discharge per hour (in liters)/m³/day.
About 30 KL/day
 - II. Is the discharge of industrial effluent continuous or intermittent and if intermittent, date & time of its discharges
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.
ZLD / Disposal of MBE concentrate into plantation.
 6. I. Working hours
About 16 hrs/day
 - II. Closed day
As & when required.
 7. Number of outlets through which industrial effluent is discharged carried outside the industry.
1. Into plantation Area - ①
2. Effluent into plantation Area.
 8. Name of the occupants/representative of the industry with designation present at the time of sampling.
Sh. Anand Kumar DGM
(H.R. & Admin.)
 9. Process not working at the time of sampling & why?
Nil
 10. Parameters to be analyzed.
As per Annexure attached.
 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 & freezer)
 - V. Others

12. Name the components of the ETP which were working. All in operation
- ii. If any component was not working why?
13. Date & time of collecting the sample 16/8/19 @ 11:00 am Ambala
14. Temperature in °C
a) Air/Sample
15. Colour and odour of the sample As per Ammonia adjusted.
16. Type of sample collected grab or composite. Grab.
17. Point of sample collection As per Ammonia adjusted.
18. Remarks:-

The samples have been collected during the visit of Monitoring Committee constituted by Hon'ble M.G.S.

The representative of the industry informed that M&S wastewater flow TDS > 400 is taken back to GIP, where TDS < 400 is discharged into plantation area.

NOTE:-

1. The samples of trade effluent of M/s Hero Cotech Ltd, Phase Viii, Mangli Road, Industrial Area, Jh. from the point mentioned at Sr. No. 18 above was collected in the presence of Sh. Mural Kumar occupier DGM, HR, Ambala representative of the industry/placed in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to them. No request to send the sample to the State Water Laboratory under section 52 (i) if the said Act has been made by occupier/representative of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed _____ bearing inscription of AEE.

- | | |
|--------------------------|--------------------------------|
| 1) <u>Gurkaran Singh</u> | 3) <u>Mr. Anand Kumar, DGM</u> |
| 2) <u>_____</u> | 4) <u>_____</u> |

Signature of the occupant/Representative of the Industry with Designation

Signature of the Officer official collecting the sample

Received sealed/unsealed and preserved sample on 17.08.19 at AM through Sh. Gurkaran Singh, AEE.

- Following Officers of the Board were present
- | | |
|--------------------------------------|---------------------------------|
| 1) <u>Mr. Lakhiana</u> | 8) <u>Mr. Anand Kumar, G.E.</u> |
| 2) <u>SBE Zo-2, Ambala</u> | 9) <u>Mr. Anand Kumar,</u> |
| 3) <u>Mr. Paramjit Singh, G.E.</u> | |
| 4) <u>Mr. Ramesh Pal, AEE</u> | |
| 5) <u>Mr. Anand Kumar Singh, JSO</u> | |
| 6) <u>Mr. Charan Singh, JSO</u> | |
| 7) <u>Mr. Anand Kumar, AEE</u> | |

K. Singh
BOARD ANALYST
Patiala


 West Eastern Ltd, Project PHI, Mangli, Indus Road Area, Ludhiana - 141010
 Date of Sampling - 16/8/19

Average obtained
 with Data sheet.

Sr. No. Part of Sampling Code Colour & odour parameter.

(1) 1. Collection Point: A1 } Pale Turbid
 Dosing tank: A2 }
 A3 }
 A4 }
 A5 } Odour non objectionable

(2) 2. Inlet to Settling Tank
 B1 } Pale Turbid
 B2 }
 B3 } non objectionable
 B4 - Metal
 B5 - G.P
 B6 - O2 G.

(3) 3. Outlet of Settling Tank
 C1 } Almost clear with slight turbidity
 C2 }
 C3 } non objectionable
 C4 - Metals
 C5 - G.P
 C6 - O2 G.

(4) 4. Condensate of HR
 D1 } Almost clear
 D2 }
 D3 } non objectionable
 D4 - Metals
 D5 - G.P
 D6 - O2 G.

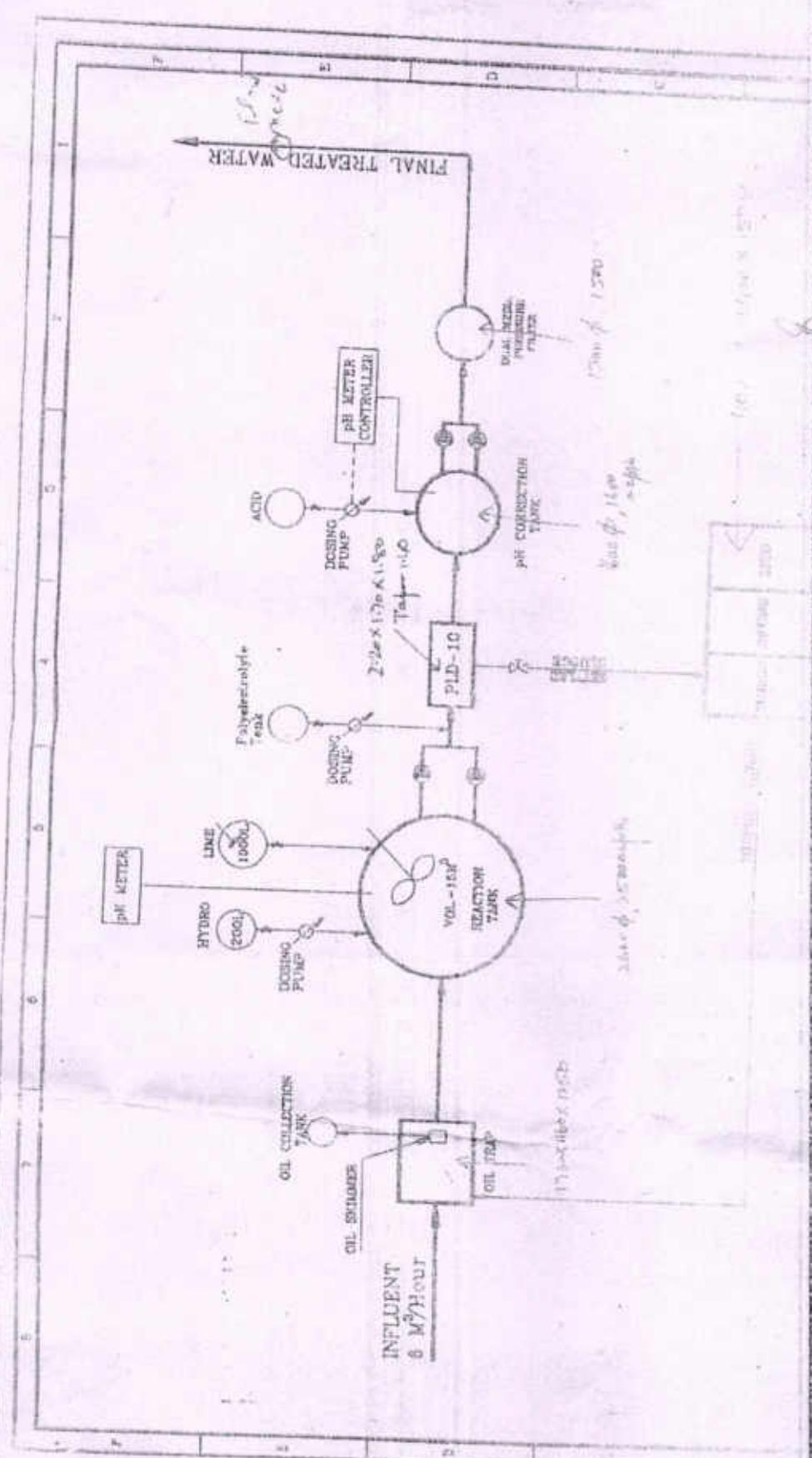
(5) 5. Inlet to RO Plant
 Y1 } Slightly Turbid
 Y2 }
 Y3 } non objectionable
 Y4 - Metals
 Y5 - G.P
 Y6 - O2 G.

(6) 6. R.O Reject
 Y1 } Almost clear
 Y2 }
 Y3 } non objectionable
 Y4 - Metals
 Y5 - G.P
 Y6 - O2 G.

(7) 7. R.O permeate
 Z1 } do-
 Z2 }
 Z3 }
 Z4 - Metals
 Z5 - G.P
 Z6 - O2 G.

Metals - Ni, Fe, Zn, Fe
 General Parameter - pH, TSS,
 TDS, Hardness,

SUNE K...
 12/8/19
 12/8/19



HERO WATER TREATMENT LIMITED
 (SUNNIVIL KUMAR)
 DSM

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No.33-38
Dated: 26.8.2019

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 17th day of August, 2019 from Sh. Gurkaran Singh AEE, sample of M/s Eveline International, Dhandari Kalan, GT Road, 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 17.08.2019 to 26.08.2019 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.	Point of Collection	pH	TDS mg/l	TSS mg/l	COD mg/l	BOD mg/l	Sulphide mg/l	Phenolic Compound mg/l	Am.n N mg/l	T.Cr mg/l	SAR	O & G mg/l
1.	Inlet	10.8	2640	120	240	70	3.2	BDL	4.8	BDL	3.49	4.2
2.	Outlet of Primary tube settler	8.2	3560	90	180	52	-	-	-	-	-	-
3.	Outlet of Secondary tube settler	8.1	3810	60	60	16	-	-	-	-	-	-
4.	R.O. Permeate	7.6	1040	BDL	BDL	BDL	-	-	-	-	-	-
5.	R.O. Reject	8.4	5220	15	52	14	-	-	-	-	-	-
6.	Outlet before MEE	8.9	835	30	48	12	2.8	BDL	2.0	BDL	3.25	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 26 day of August, 2019
Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

Meenu Sharma (26/8/19)
(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-II, Ludhiana
Authorisation Letter No. -

Dated -

Endst No. *25778-79*

dt. *27/8/2019*

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.

Meenu Sharma (26/8/19)
(Signature)
State Board Analyst



PUNJAB POLLUTION CONTROL BOARD
 Head office, Vatavaran Bhawan
 Nabha Road, Patiala

DETAILS OF BE SUPPLIED FOR THE COLLECTION OF SAMPLE

PART-A

1. Name & Address of the Industry *M/s Evchie International*
Dhandhari Kolan, Gifford, Ludhiana-141010
2. Raw material used *Wool / fabric & chemicals*
3. i. Product *Dyed fabric*
 ii. Processes involved *W.M - Dyeing - Squeezing - Dyer - Compressor -*
Cutting / Slitting - Stitching - Final
4. i. Give the name of the processes in operation at the time of sampling *All in operation*
 ii. The number of wastewater streams from different processes along with discharge of each. *Two no. [Inlet of E.T.P (398 m³/hr)]*
R.O reject
5. i. Quantity of industrial effluent discharge per hour (in liters)/m³/day. *31.47 m³/hr*
 ii. Is the discharge of industrial effluent continuous or intermittent and its intermittent, date & time of its discharges *Both process Intermittent.*
 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. *Currently into sewer & process but also part effluent is discharged into plantation*
6. i. Working hours *2 shifts*
 ii. Closed day *Sunday*
7. Number of outlets through which industrial effluent is discharged / carried outside the industry. *One*
8. Name of the occupants/representative of the industry with designation present at the time of sampling. *Sh. Ravinder Goyal (Manager E.T.P.)*
9. Process not working at the time of sampling & why? *-*
10. Parameters to be analyzed. *EV A2, EV B1, EV D1, EV E1, EV F1, EV G1, EV H1, EV I1, EV J1, EV K1, EV L1, EV M1, EV N1, EV O1, EV P1, EV Q1, EV R1, EV S1, EV T1, EV U1, EV V1, EV W1, EV X1, EV Y1, EV Z1, EV AA1, EV AB1, EV AC1, EV AD1, EV AE1, EV AF1, EV AG1, EV AH1, EV AI1, EV AJ1, EV AK1, EV AL1, EV AM1, EV AN1, EV AO1, EV AP1, EV AQ1, EV AR1, EV AS1, EV AT1, EV AU1, EV AV1, EV AW1, EV AX1, EV AY1, EV AZ1, EV BA1, EV BB1, EV BC1, EV BD1, EV BE1, EV BF1, EV BG1, EV BH1, EV BI1, EV BJ1, EV BK1, EV BL1, EV BM1, EV BN1, EV BO1, EV BP1, EV BQ1, EV BR1, EV BS1, EV BT1, EV BU1, EV BV1, EV BW1, EV BX1, EV BY1, EV BZ1, EV CA1, EV CB1, EV CC1, EV CD1, EV CE1, EV CF1, EV CG1, EV CH1, EV CI1, EV CJ1, EV CK1, EV CL1, EV CM1, EV CN1, EV CO1, EV CP1, EV CQ1, EV CR1, EV CS1, EV CT1, EV CU1, EV CV1, EV CW1, EV CX1, EV CY1, EV CZ1, EV DA1, EV DB1, EV DC1, EV DD1, EV DE1, EV DF1, EV DG1, EV DH1, EV DI1, EV DJ1, EV DK1, EV DL1, EV DM1, EV DN1, EV DO1, EV DP1, EV DQ1, EV DR1, EV DS1, EV DT1, EV DU1, EV DV1, EV DW1, EV DX1, EV DY1, EV DZ1, EV EA1, EV EB1, EV EC1, EV ED1, EV EE1, EV EF1, EV EG1, EV EH1, EV EI1, EV EJ1, EV EK1, EV EL1, EV EM1, EV EN1, EV EO1, EV EP1, EV EQ1, EV ER1, EV ES1, EV ET1, EV EU1, EV EV1, EV EW1, EV EX1, EV EY1, EV EZ1, EV FA1, EV FB1, EV FC1, EV FD1, EV FE1, EV FF1, EV FG1, EV FH1, EV FI1, EV FJ1, EV FK1, EV FL1, EV FM1, EV FN1, EV FO1, EV FP1, EV FQ1, EV FR1, EV FS1, EV FT1, EV FU1, EV FV1, EV FW1, EV FX1, EV FY1, EV FZ1, EV GA1, EV GB1, EV GC1, EV GD1, EV GE1, EV GF1, EV GH1, EV GI1, EV GJ1, EV GK1, EV GL1, EV GM1, EV GN1, EV GO1, EV GP1, EV GQ1, EV GR1, EV GS1, EV GT1, EV GU1, EV GV1, EV GW1, EV GX1, EV GY1, EV GZ1, EV HA1, EV HB1, EV HC1, EV HD1, EV HE1, EV HF1, EV HG1, EV HH1, EV HI1, EV HJ1, EV HK1, EV HL1, EV HM1, EV HN1, EV HO1, EV HP1, EV HQ1, EV HR1, EV HS1, EV HT1, EV HU1, EV HV1, EV HW1, EV HX1, EV HY1, EV HZ1, EV IA1, EV IB1, EV IC1, EV ID1, EV IE1, EV IF1, EV IG1, EV IH1, EV II1, EV IJ1, EV IK1, EV IL1, EV IM1, EV IN1, EV IO1, EV IP1, EV IQ1, EV IR1, EV IS1, EV IT1, EV IU1, EV IV1, EV IW1, EV IX1, EV IY1, EV IZ1, EV JA1, EV JB1, EV JC1, EV JD1, EV JE1, EV JF1, EV JG1, EV JH1, EV JI1, EV JJ1, EV JK1, EV JL1, EV JM1, EV JN1, EV JO1, EV JP1, EV JQ1, EV JR1, EV JS1, EV JT1, EV JU1, EV JV1, EV JW1, EV JX1, EV JY1, EV JZ1, EV KA1, EV KB1, EV KC1, EV KD1, EV KE1, EV KF1, EV KG1, EV KH1, EV KI1, EV KJ1, EV KK1, EV KL1, EV KM1, EV KN1, EV KO1, EV KP1, EV KQ1, EV KR1, EV KS1, EV KT1, EV KU1, EV KV1, EV KW1, EV KX1, EV KY1, EV KZ1, EV LA1, EV LB1, EV LC1, EV LD1, EV LE1, EV LF1, EV LG1, EV LH1, EV LI1, EV LJ1, EV LK1, EV LL1, EV LM1, EV LN1, EV LO1, EV LP1, EV LQ1, EV LR1, EV LS1, EV LT1, EV LU1, EV LV1, EV LW1, EV LX1, EV LY1, EV LZ1, EV MA1, EV MB1, EV MC1, EV MD1, EV ME1, EV MF1, EV MG1, EV MH1, EV MI1, EV MJ1, EV MK1, EV ML1, EV MM1, EV MN1, EV MO1, EV MP1, EV MQ1, EV MR1, EV MS1, EV MT1, EV MU1, EV MV1, EV MW1, EV MX1, EV MY1, EV MZ1, EV NA1, EV NB1, EV NC1, EV ND1, EV NE1, EV NF1, EV NG1, EV NH1, EV NI1, EV NJ1, EV NK1, EV NL1, EV NM1, EV NO1, EV NP1, EV NQ1, EV NR1, EV NS1, EV NT1, EV NU1, EV NV1, EV NW1, EV NX1, EV NY1, EV NZ1, EV OA1, EV OB1, EV OC1, EV OD1, EV OE1, EV OF1, EV OG1, EV OH1, EV OI1, EV OJ1, EV OK1, EV OL1, EV OM1, EV ON1, EV OO1, EV OP1, EV OQ1, EV OR1, EV OS1, EV OT1, EV OU1, EV OV1, EV OW1, EV OX1, EV OY1, EV OZ1, EV PA1, EV PB1, EV PC1, EV PD1, EV PE1, EV PF1, EV PG1, EV PH1, EV PI1, EV PJ1, EV PK1, EV PL1, EV PM1, EV PN1, EV PO1, EV PP1, EV PQ1, EV PR1, EV PS1, EV PT1, EV PU1, EV PV1, EV PW1, EV PX1, EV PY1, EV PZ1, EV QA1, EV QB1, EV QC1, EV QD1, EV QE1, EV QF1, EV QG1, EV QH1, EV QI1, EV QJ1, EV QK1, EV QL1, EV QM1, EV QN1, EV QO1, EV QP1, EV QQ1, EV QR1, EV QS1, EV QT1, EV QU1, EV QV1, EV QW1, EV QX1, EV QY1, EV QZ1, EV RA1, EV RB1, EV RC1, EV RD1, EV RE1, EV RF1, EV RG1, EV RH1, EV RI1, EV RJ1, EV RK1, EV RL1, EV RM1, EV RN1, EV RO1, EV RP1, EV RQ1, EV RR1, EV RS1, EV RT1, EV RU1, EV RV1, EV RW1, EV RX1, EV RY1, EV RZ1, EV SA1, EV SB1, EV SC1, EV SD1, EV SE1, EV SF1, EV SG1, EV SH1, EV SI1, EV SJ1, EV SK1, EV SL1, EV SM1, EV SN1, EV SO1, EV SP1, EV SQ1, EV SR1, EV SS1, EV ST1, EV SU1, EV SV1, EV SW1, EV SX1, EV SY1, EV SZ1, EV TA1, EV TB1, EV TC1, EV TD1, EV TE1, EV TF1, EV TG1, EV TH1, EV TI1, EV TJ1, EV TK1, EV TL1, EV TM1, EV TN1, EV TO1, EV TP1, EV TQ1, EV TR1, EV TS1, EV TT1, EV TU1, EV TV1, EV TW1, EV TX1, EV TY1, EV TZ1, EV UA1, EV UB1, EV UC1, EV UD1, EV UE1, EV UF1, EV UG1, EV UH1, EV UI1, EV UJ1, EV UK1, EV UL1, EV UM1, EV UN1, EV UO1, EV UP1, EV UQ1, EV UR1, EV US1, EV UT1, EV UV1, EV UW1, EV UX1, EV UY1, EV UZ1, EV VA1, EV VB1, EV VC1, EV VD1, EV VE1, EV VF1, EV VG1, EV VH1, EV VI1, EV VJ1, EV VK1, EV VL1, EV VM1, EV VN1, EV VO1, EV VP1, EV VQ1, EV VR1, EV VS1, EV VT1, EV VU1, EV VV1, EV VW1, EV VX1, EV VY1, EV VZ1, EV WA1, EV WB1, EV WC1, EV WD1, EV WE1, EV WF1, EV WG1, EV WH1, EV WI1, EV WJ1, EV WK1, EV WL1, EV WM1, EV WN1, EV WO1, EV WP1, EV WQ1, EV WR1, EV WS1, EV WT1, EV WU1, EV WV1, EV WW1, EV WX1, EV WY1, EV WZ1, EV XA1, EV XB1, EV XC1, EV XD1, EV XE1, EV XF1, EV XG1, EV XH1, EV XI1, EV XJ1, EV XK1, EV XL1, EV XM1, EV XN1, EV XO1, EV XP1, EV XQ1, EV XR1, EV XS1, EV XT1, EV XU1, EV XV1, EV XW1, EV XX1, EV XY1, EV XZ1, EV YA1, EV YB1, EV YC1, EV YD1, EV YE1, EV YF1, EV YG1, EV YH1, EV YI1, EV YJ1, EV YK1, EV YL1, EV YM1, EV YN1, EV YO1, EV YP1, EV YQ1, EV YR1, EV YS1, EV YT1, EV YU1, EV YV1, EV YW1, EV YX1, EV YY1, EV YZ1, EV ZA1, EV ZB1, EV ZC1, EV ZD1, EV ZE1, EV ZF1, EV ZG1, EV ZH1, EV ZI1, EV ZJ1, EV ZK1, EV ZL1, EV ZM1, EV ZN1, EV ZO1, EV ZP1, EV ZQ1, EV ZR1, EV ZS1, EV ZT1, EV ZU1, EV ZV1, EV ZW1, EV ZX1, EV ZY1, EV ZZ1*
11. Sample preserved for (tick)
 - i. Organic parameter (freezer below 4°C) *EV A2, EV D2, EV E2, EV F2, EV G2, EV H2, EV I2, EV J2, EV K2, EV L2, EV M2, EV N2, EV O2, EV P2, EV Q2, EV R2, EV S2, EV T2, EV U2, EV V2, EV W2, EV X2, EV Y2, EV Z2, EV AA2, EV AB2, EV AC2, EV AD2, EV AE2, EV AF2, EV AG2, EV AH2, EV AI2, EV AJ2, EV AK2, EV AL2, EV AM2, EV AN2, EV AO2, EV AP2, EV AQ2, EV AR2, EV AS2, EV AT2, EV AU2, EV AV2, EV AW2, EV AX2, EV AY2, EV AZ2, EV BA2, EV BB2, EV BC2, EV BD2, EV BE2, EV BF2, EV BG2, EV BH2, EV BI2, EV BJ2, EV BK2, EV BL2, EV BM2, EV BN2, EV BO2, EV BP2, EV BQ2, EV BR2, EV BS2, EV BT2, EV BU2, EV BV2, EV BW2, EV BX2, EV BY2, EV BZ2, EV CA2, EV CB2, EV CC2, EV CD2, EV CE2, EV CF2, EV CG2, EV CH2, EV CI2, EV CJ2, EV CK2, EV CL2, EV CM2, EV CN2, EV CO2, EV CP2, EV CQ2, EV CR2, EV CS2, EV CT2, EV CU2, EV CV2, EV CW2, EV CX2, EV CY2, EV CZ2, EV DA2, EV DB2, EV DC2, EV DD2, EV DE2, EV DF2, EV DG2, EV DH2, EV DI2, EV DJ2, EV DK2, EV DL2, EV DM2, EV DN2, EV DO2, EV DP2, EV DQ2, EV DR2, EV DS2, EV DT2, EV DU2, EV DV2, EV DW2, EV DX2, EV DY2, EV DZ2, EV EA2, EV EB2, EV EC2, EV ED2, EV EE2, EV EF2, EV EG2, EV EH2, EV EI2, EV EJ2, EV EK2, EV EL2, EV EM2, EV EN2, EV EO2, EV EP2, EV EQ2, EV ER2, EV ES2, EV ET2, EV EU2, EV EV2, EV EW2, EV EX2, EV EY2, EV EZ2, EV FA2, EV FB2, EV FC2, EV FD2, EV FE2, EV FF2, EV FG2, EV FH2, EV FI2, EV FJ2, EV FK2, EV FL2, EV FM2, EV FN2, EV FO2, EV FP2, EV FQ2, EV FR2, EV FS2, EV FT2, EV FU2, EV FV2, EV FW2, EV FX2, EV FY2, EV FZ2, EV GA2, EV GB2, EV GC2, EV GD2, EV GE2, EV GF2, EV GH2, EV GI2, EV GJ2, EV GK2, EV GL2, EV GM2, EV GN2, EV GO2, EV GP2, EV GQ2, EV GR2, EV GS2, EV GT2, EV GU2, EV GV2, EV GW2, EV GX2, EV GY2, EV GZ2, EV HA2, EV HB2, EV HC2, EV HD2, EV HE2, EV HF2, EV HG2, EV HI2, EV HJ2, EV HK2, EV HL2, EV HM2, EV HN2, EV HO2, EV HP2, EV HQ2, EV HR2, EV HS2, EV HT2, EV HU2, EV HV2, EV HW2, EV HX2, EV HY2, EV HZ2, EV IA2, EV IB2, EV IC2, EV ID2, EV IE2, EV IF2, EV IG2, EV IH2, EV II2, EV IJ2, EV IK2, EV IL2, EV IM2, EV IN2, EV IO2, EV IP2, EV IQ2, EV IR2, EV IS2, EV IT2, EV IU2, EV IV2, EV IW2, EV IX2, EV IY2, EV IZ2, EV JA2, EV JB2, EV JC2, EV JD2, EV JE2, EV JF2, EV JG2, EV JH2, EV JI2, EV JJ2, EV JK2, EV JL2, EV JM2, EV JN2, EV JO2, EV JP2, EV JQ2, EV JR2, EV JS2, EV JT2, EV JU2, EV JV2, EV JW2, EV JX2, EV JY2, EV JZ2, EV KA2, EV KB2, EV KC2, EV KD2, EV KE2, EV KF2, EV KG2, EV KH2, EV KI2, EV KJ2, EV KL2, EV KM2, EV KN2, EV KO2, EV KP2, EV KQ2, EV KR2, EV KS2, EV KT2, EV KU2, EV KV2, EV KW2, EV KX2, EV KY2, EV KZ2, EV LA2, EV LB2, EV LC2, EV LD2, EV LE2, EV LF2, EV LG2, EV LH2, EV LI2, EV LJ2, EV LK2, EV LL2, EV LM2, EV LN2, EV LO2, EV LP2, EV LQ2, EV LR2, EV LS2, EV LT2, EV LU2, EV LV2, EV LW2, EV LX2, EV LY2, EV LZ2, EV MA2, EV MB2, EV MC2, EV MD2, EV ME2, EV MF2, EV MG2, EV MH2, EV MI2, EV MJ2, EV MK2, EV ML2, EV MM2, EV MN2, EV MO2, EV MP2, EV MQ2, EV MR2, EV MS2, EV MT2, EV MU2, EV MV2, EV MW2, EV MX2, EV MY2, EV MZ2, EV NA2, EV NB2, EV NC2, EV ND2, EV NE2, EV NF2, EV NG2, EV NH2, EV NI2, EV NJ2, EV NK2, EV NL2, EV NM2, EV NO2, EV NP2, EV NQ2, EV NR2, EV NS2, EV NT2, EV NU2, EV NV2, EV NW2, EV NX2, EV NY2, EV NZ2, EV OA2, EV OB2, EV OC2, EV OD2, EV OE2, EV OF2, EV OG2, EV OH2, EV OI2, EV OJ2, EV OK2, EV OL2, EV OM2, EV ON2, EV OO2, EV OP2, EV OQ2, EV OR2, EV OS2, EV OT2, EV OU2, EV OV2, EV OW2, EV OX2, EV OY2, EV OZ2, EV PA2, EV PB2, EV PC2, EV PD2, EV PE2, EV PF2, EV PG2, EV PH2, EV PI2, EV PJ2, EV PK2, EV PL2, EV PM2, EV PN2, EV PO2, EV PP2, EV PQ2, EV PR2, EV PS2, EV PT2, EV PU2, EV PV2, EV PW2, EV PX2, EV PY2, EV PZ2, EV QA2, EV QB2, EV QC2, EV QD2, EV QE2, EV QF2, EV QG2, EV QH2, EV QI2, EV QJ2, EV QK2, EV QL2, EV QM2, EV QN2, EV QO2, EV QP2, EV QQ2, EV QR2, EV QS2, EV QT2, EV QU2, EV QV2, EV QW2, EV QX2, EV QY2, EV QZ2, EV RA2, EV RB2, EV RC2, EV RD2, EV RE2, EV RF2, EV RG2, EV RH2, EV RI2, EV RJ2, EV RK2, EV RL2, EV RM2, EV RN2, EV RO2, EV RP2, EV RQ2, EV RR2, EV RS2, EV RT2, EV RU2, EV RV2, EV RW2, EV RX2, EV RY2, EV RZ2, EV SA2, EV SB2, EV SC2, EV SD2, EV SE2, EV SF2, EV SG2, EV SH2, EV SI2, EV SJ2, EV SK2, EV SL2, EV SM2, EV SN2, EV SO2, EV SP2, EV SQ2, EV SR2, EV SS2, EV ST2, EV SU2, EV SV2, EV SW2, EV SX2, EV SY2, EV SZ2, EV TA2, EV TB2, EV TC2, EV TD2, EV TE2, EV TF2, EV TG2, EV TH2, EV TI2, EV TJ2, EV TK2, EV TL2, EV TM2, EV TN2, EV TO2, EV TP2, EV TQ2, EV TR2, EV TS2, EV TT2, EV TU2, EV TV2, EV TW2, EV TX2, EV TY2, EV TZ2, EV UA2, EV UB2, EV UC2, EV UD2, EV UE2, EV UF2, EV UG2, EV UH2, EV UI2, EV UJ2, EV UK2, EV UL2, EV UM2, EV UN2, EV UO2, EV UP2, EV UQ2, EV UR2, EV US2, EV UT2, EV UV2, EV UW2, EV UX2, EV UY2, EV UZ2, EV VA2, EV VB2, EV VC2, EV VD2, EV VE2, EV VF2, EV VG2, EV VH2, EV VI2, EV VJ2, EV VK2, EV VL2, EV VM2, EV VN2, EV VO2, EV VP2, EV VQ2, EV VR2, EV VS2, EV VT2, EV VU2, EV VV2, EV VW2, EV VX2, EV VY2, EV VZ2, EV WA2, EV WB2, EV WC2, EV WD2, EV WE2, EV WF2, EV WG2, EV WH2, EV WI2, EV WJ2, EV WK2, EV WL2, EV WM2, EV WN2, EV WO2, EV WP2, EV WQ2, EV WR2, EV WS2, EV WT2, EV WU2, EV WV2, EV WW2, EV WX2, EV WY2, EV WZ2, EV XA2, EV XB2, EV XC2, EV XD2, EV XE2, EV XF2, EV XG2, EV XH2, EV XI2, EV XJ2, EV XK2, EV XL2, EV XM2, EV XN2, EV XO2, EV XP2, EV XQ2, EV XR2, EV XS2, EV XT2, EV XU2, EV XV2, EV XW2, EV XX2, EV XY2, EV XZ2, EV YA2, EV YB2, EV YC2, EV YD2, EV YE2, EV YF2, EV YG2, EV YH2, EV YI2, EV YJ2, EV YK2, EV YL2, EV YM2, EV YN2, EV YO2, EV YP2, EV YQ2, EV YR2, EV YS2, EV YT2, EV YU2, EV YV2, EV YW2, EV YX2, EV YY2, EV YZ2, EV ZA2, EV ZB2, EV ZC2, EV ZD2, EV ZE2, EV ZF2, EV ZG2, EV ZH2, EV ZI2, EV ZJ2, EV ZK2, EV ZL2, EV ZM2, EV ZN2, EV ZO2, EV ZP2, EV ZQ2, EV ZR2, EV ZS2, EV ZT2, EV ZU2, EV ZV2, EV ZW2, EV ZX2, EV ZY2, EV ZZ2*
 - ii. Metals (pH less than 2 with HNO₃) *EV A3 & EV G3 - O & G*
 - iii. Cyanide (pH above 10 with NaOH) *EV A4 & EV G4 - Thiocyanide*
 - iv. Oil & grease (separate 1 Lt. sample glass bottles & freezer) *EV A5 & EV G5 - Phenolic compound*
 - v. Others *EV A6 & EV G6 - T. & PAR*

12. i. Name the components of the ETP which were working. Equalization tank - Dosing tank - Aeration tank - Primary Tube settler - Aeration tank - Secondary Tube settler - Recirculation pond (RAS) filter - Activated carbon filter - UV - R.O - M. G.E - Final
- ii. If any component is not working why? None
13. Date & time of collecting the sample 10/11/19 @ 5:00 P.M. on 10/11/19
14. Temperature in °C
a) Air/Sample 28° / Inlet - 38°C Outlet - 20°C.
15. Colour and odour of the sample Dark color / non objectionable
16. Type of sample collected (grab or composite). Grab
17. Point of sample collection A - Inlet, B - Outlet of 1st Tube settler, C - Outlet of 2nd Tube settler, D - R.O permeate, E - R.O reject, G - outlet before M.G.E.
18. Remarks:- A - Clear, F - light pink, G - clear non objectionable

The samples have been collected during the visit of monitoring committee constituted by Honble M.G.S. following officers of the Board were present
 1) C.E.G. Ludhiana 2) AEE 20-2 Ludhiana 3) Sr. Chemist Singh, J.S. 4) Sr. Chemist Singh, J.S. 5) Sr. Chemist Singh, J.S.
 NOTE: 1) M. G. S. Singh, AEE.

i. The samples of trade effluent of M/s Freche International District State G. S. Singh, J.S. from the point mentioned at Sr. No. 18 above was collected in the presence of Sh. Ravinder Grewal (Manager Engg) occupier representative of the industry/placed in dry empty container after explaining the provisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to them. No request to send the sample to the State Water Laboratory under section 52 (i) if the said Act has been made by occupier representative of the industry. The sample was stirred and placed in dry bottle/dry bottles and sealed hearing inscription of AEE.

1) Sh. Ravinder Grewal (Manager Engg) 3) Sh. Ravinder Grewal (Manager Engg)
 2) _____ 4) _____

[Signature]
 Signature of the occupier/Representative of the Industry with Designation

[Signature]
 Signature of the Officer official collecting the sample

Received sealed/unsalted and preserved sample on 17/8/19 at [Blank] through Sh. Gurpreet Singh AEE

[Signature]
 BOARD ANALYST
 Patiala

Minutes of the meeting held under the Chairmanship of Justice Pritam Pal, Former Judge Punjab & Haryana High Court now as Chairman of the Monitoring Committee constituted by the Hon'ble NGT in OA No.916 of 2018 in the matter of Sobha Singh & Ors. Vs. State of Punjab & Orson 1.8.2019 at 11.00 A.M. at Circuit House, Jalandhar with the District Level Officers of District Jalandhar and Kapurthala.

The list of the participants is as per Annexure -I.

Chief Environmental Engineer, Punjab Pollution Control Board, Jalandhar welcomed the Chairman, Members of the Monitoring Committee alongwith other officers of the district Jalandhar and Kapurthala. He apprised that the meeting has been held to monitor the status of the activities carried out / being carried out to control of pollution in Kala Singhian Drain, Jalandhar and Holy Bein (Kali Bein), Sultanpur Lodhi (Kapurthala).

Thereafter, the agenda of the meeting was taken for discussion.

A. Kapurthala:

1. Operation of STP Sultanpur Lodhi

(i) De-sludging of ponds of STP

The Executive Officer, M.C. Sultanpur Lodhi apprised that one pond of STP has been de-sludged and **the work of the de-sludging of the another pond shall be completed by 31.08.2019 and STP shall be made fully operational by 31.08.2019.**

(ii) Replacing of two non operational lifting pumps with new pumps

It was informed that two non-operational pumps shall be replaced and **made operational by 31.08.2019.**

(iii) Tapping the discharge of sewage into Sultanpur drain leading to Holy Bein.

It was apprised that since the non-operational pumps shall be made operational by 31.08.2019, which shall also result into tapping the discharge of sewage and the same shall be taken into STP, Sultanpur Lodhi. As such, there shall be no discharge into Sultanpur drain leading to Holy Bein.

(iv) Present performance of STP

Chief Environmental Engineer, Jalandhar informed that the monitoring of STP Sultanpur Lodhi is carried out on monthly basis and the value of BOD and F.Coil as observed in the month of April to July, 2019 were observed as 26-45 mg/l and 13000-22000 MPN/100 ml, respectively.

These results indicates that the STP is not achieving the prescribed standards.

Executive Officer, M.C. Sultanpur Lodhi claimed that after replacement of two lifting pumps and de-sludging of the ponds, STP shall meet with the standards. For the control of F.Coil, proper mechanism shall be provided for proper dosing of chlorine in the treated effluent. **He assured that the STP shall meet with the standards by 31.08.2019.**

(v) Utilization of treated sewage for irrigation

It was apprised that presently, part of the treated sewerage is used for irrigation and the remaining effluent is still being discharged into drain leading to Holy Bein. The SubDivisional Soil Conservation Officer, Kapurthala, assured that whole of the treated sewage of the STP shall be utilized in 100 acres of land of farmers of the nearby villages. Thereafter, no treated / untreated sewage shall be discharged into drain leading to Holy Bein.

Besides, it was informed that two STPs of capacity 4 MLD (replacing 2.6 MLD existing STP) and 1 MLD new STP shall be installed within time schedule as mentioned in the Action Plan for clean of River Beas.

Chairman of the Monitoring Committee asked Deputy Commissioner, Kapurthala to hold meeting with the stakeholders to resolve the issue and ask them for timely installation of STPs and utilization of treated sewage in the existing command area.

2. Operation of STP Kapurthala:

i) Operation of USAB reactors and de-sludging of the polishing tanks

It was informed that DPR for upgradation of UASB Reactor and other components of STP has not been finalized by PWSSB. However, Executive Officer, M.C. Kapurthala shall deposit the funds for upgradation of STP with the Deptt. of Water Supply & Sewerage Board within 15 days. It was also apprised that one polishing tank has already been de-sludged. For de-sludging of 2nd polishing tank, there is need to call the tenders and the activities w.r.t. de-sludging of polishing tank and upgradation of STP shall be carried out simultaneously.

Chairman of the Monitoring Committee asked the officers of the PWSSB to finalize the DPR within 15 days and call the tenders within next 07 days. It was further directed that the upgradation of UASB Reactor and other components of STP shall be completed and commissioned by 31.03.2020. PWSSB shall ensure that the upgraded STP shall achieve the standards as directed by the Hon'ble National Green Tribunal in OA No. 1069/2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & Others.

ii) Plugging the bye pass system carrying untreated sewage into drain leading to Holy Bein.

It was informed that the plugging of the bye-pass system, carrying untreated sewage into drain, leading to Holy Bein, has already been made.

Punjab Pollution Control Board has been directed to verify the same.

iii) Utilization of treated sewage for irrigation.

It was informed that presently, the treated sewage of STP Kapurthala is used in 299 hectares of land of farmers of nearby villages. Baba Seechewal apprised that presently the pipeline carrying treated sewage is not properly operational due to its chocking.

The Monitoring Committee asked Department of Soil & Water Conservation to clean the pipelines by 31.08.2019 and ensure that it shall be made fully operational for all the times.

iv) Improvement to be made in the chlorination system

It was informed that the chlorination to be imported to the treated sewage has also been included in the plan for upgradation of STP. Therefore, chlorination system shall also be made operational simultaneously with the operation of upgraded STP.

Chairman of the Monitoring Committee asked the Deputy Commissioner, Kapurthala to coordinate the matter regarding upgradation of STP and shall ask E.O. Kapurthala to deposit the funds with the Sewerage Board so that the work of STP may be completed well in time.

3. Installation of STP of capacity 3 MLD for treatment of sewage of Rawal & its colonies being carried through Bhulana Drain:

Additional Chief Administrator, Jalandhar informed that the funds amounting to Rs.2 Crores have already been deposited with PWSSB, of which the value of land shall be paid by PWSSB and the remaining funds shall be utilized for the construction of STP.

The Executive Engineer, PWSSB informed that the cost of construction of STP including the value of land is Rs.6 Crores and there is need to arrange additional funds amounting to Rs.4 Crores of completion of the project.

Chairman of the Monitoring Committee asked the Deputy Commissioner, Kapurthala to coordinate among these departments viz. Deptt of Housing & Urban Development, Deptt. of Rural Development & Panchayat & Deptt. of Water Supply & Sewerage Board and make arrangements to procure the balance funds amounting to Rs.4 Crores, so that STP may be set up within the time schedule.

4. Plugging of outlet of Wadala Drain carrying untreated domestic effluent of Kapurthala town into Holy Bein.

The Executive Engineer, Deptt. of Rural Development & Panchayat informed that presently 2 outlets of 6 outlets have been closed and **the remaining outlet shall be closed by 15.10.2019.**

5. Plugging of disposal of sewage/sullage of Village Kheda Donna, presently being discharged into Holy Bein.

The Executive Engineer, Deptt. of Rural Development & Panchayat informed that the disposal system has been made operational and the sewage/sullage of the village has been started to take into the pond for treatment. An alternate arrangements have been made by installing DG sets at the site. However, there is an issue of overflow of effluent from collection tank and in order to sort out the issue, there is need to replace the transformer.

Chairman Monitoring Committee asked Deputy Commissioner, Kapurthala to hold meeting with PSPCL and Deptt. of Rural Development & Panchayat and ensure that the old transformer shall be replaced with new transformer so that the disposal & treatment system in the pond may be operated regularly.

Deptt. of Rural Development & Panchayat assured that no sewage of the village shall be discharged into Holy Bein. The said work shall be completed by 08.08.2019.

Chairman of the Monitoring Committee informed the Officers present in the meeting that every efforts shall be made to ensure that the above activities are completed and commissioned within time schedule as mentioned above. Any lapse on the part of the Officer shall be viewed seriously by the Committee.

B) Jalandhar

1. Closing of outlets into Kala Singhian Drain:

Chief Environmental Engineer, Punjab Pollution Control Board, Jalandhar apprised as under:-

(i) Outlets maintained by PSIEC

PSIEC has maintained two disposal points in Focal Point near Beant Singh Park and M/s Jagran Prakashan Jalandhar. First disposal point near Beant Singh Park has been connected with M.C. sewer and the 2nd disposal point, which is in operation, carries untreated sewage of Focal Point, Jalandhar into Kala Singhian Drain.

Executive Engineer, PSIEC informed that the Department is in the process of connecting the disposal point near Jagran Prakashan with the sewerage system of M.C., Jalandhar and the same shall be connected by 20.08.2019.

For installation of separate STP for treatment of sewage of Focal Point, it was informed that the DPR is under preparation.

Chairman of the Monitoring Committee directed the concerned Executive Engineer to submit complete timelines including tendering, installation and commissioning of STP and ensure that the said STP shall also be completed within the time schedule.

(ii) Outlets maintained by PSIEC near Sports and Surgical Goods Complex, Jalandhar.

Regarding closing of the outlets, carrying domestic effluents from the Sports & Surgical Goods Complex; Dry Leather Complex & Leather Complex, Jalandhar into Kala Singhian Drain, it was informed that these outlets have been closed. However, Punjab Pollution Control Board claimed that these outlets have been temporarily closed and the discharge is still being maintained into Kala Singhian Drain as observed during the visit made on 30.07.2019.

Chairman of the Monitoring Committee directed that these outlets should be closed permanently by PSIEC and Punjab Pollution Control Board shall verify the same and ensure that no such outlet is maintained into Kala Singhian drain after 31.08.2019. Regarding operation of storm water drain, it was directed that these may be made operational only in heavy rains or in exigency and i.e. only in the presence of Officers of Punjab Pollution Control Board.

(iii) **Outlets of Kalia Colony, Shaheed Bhagat Singh Colony, Industrial Area, Sabzi Mandi disposal, Village Nagra and Sheetal Nagar, maintained by M.C. Jalandhar**

Chief Environmental Engineer, Punjab Pollution Control Board, Jalandhar informed that the outlets of Kalia Colony, Shaheed Bhagat Singh Colony, Industrial Area, Sabzi Mandi disposal, Village Nagra and Sheetal Nagar area have been maintained by M.C. Jalandhar into Kala Singhian Drain. The details are as follows:

a) Outlet of Kalia Colony:

Not yet connected with M.C. sewer.

b) Outlet of Shaheed Bhagat Singh Colony:

Connected with M.C. sewer, but bye-pass arrangements in the form of M.S. Pipeline exists.

c) Outlet of Industrial Area:

Connected with M.C. sewer, but there is an overflow pipeline provided, which was in operation and untreated sewage was being discharged into Kala Singhian Drain.

d) Outlet of Sabzi Mandi disposal:

Connected with M.C. sewer. Further, a sewer outfall of M.C Jalandhar originating from zone-1 was found still discharging into Kala Sanghian Drain, which is required to be diverted to STP. The M.C Jalandhar has failed to clean the sewer line, so far.

e) Outlet of M.C. Nagra:

It was informed that PWSSBhas constructed a manhole near the Kala Sanghian Drain. PWSSB claimed that this outlet has now been connected to sewerage system.

Punjab Pollution Control Board has been asked to verify the same.

f) Outlet of Shital Nagar:

A sewer line coming from Shital Nagar, Jalandhar to Firozpur line is still leading into Kala Sanghian Drain, which is yet to be connected with M.C sewer.

(iv) Outlets of Mandi Board disposal of Sabzi Mandi Maqsudan:

It was informed that Mandi Board Department has failed to divert the outlet of Mandi into Kala Sanghian Drain and has failed to submit any proposal in this regard till date and SabziMandi is still discharging their untreated effluent into Kala Sanghian Drain.

Chairman of the Monitoring Committee directed the Mandi Board shall deposit the necessary fundswith the M.C. Jalandhar within 7 days to get connectivityof Mandi Board disposal system with sewerage system of M.C., Jalandhar leading to STP with 15 days.

(v) Outlets of Village Raowali and Village Bulandpur:

Sewage of Village Raowali and Village Bulandpur is still being discharged into Kala Sanghian drain.

Chairman of the Monitoring Committee directed the Deputy Commissioner, Jalandhar to hold meeting with the Executive Engineer, Deptt. of Rural Development & Panchayat and DDPO and direct them to plug these outlets by 31.10.2019.

(vi) Outlets of Dairies located at Village Nalah:

It was informed that the effluent of dairies is still being discharged into Kala Sanghian drain.

Chairman of the Monitoring Committee directed the Deputy Commissioner, Jalandhar to hold meeting with PEDA, DDPO and Commissioner, M.C. Jalandhar and direct them to install biogas plant as well as ETP for management of effluent from these dairies by 30.6.2020.

(vii) Cleaning/desilting of the sewer line by M.C. Jalandhar:

It was informed that the sewer line of the area has been choked and is unable to carry the sewage.

Chairman of the Monitoring Committee directed the Commissioner, M.C. Jalandhar to clean/desilt the choked

Sewerline using super suction machine and ensure that the said work shall be completed by 31.10.2019.

2. CETP Leather Complex, Jalandhar:

(i) Performance of CETP for Leather Complex, Jalandhar:

Chief Environmental Engineer, Punjab Pollution Control Board, Jalandhar informed that the monitoring of CETP is being done on monthly basis. Lastly, the treated effluent samples were collected on 04.07.2019 and the values of the parameters namely BOD, sulphide, Total Chrome, TSS and TDS were observed as 101 mg/l, 1.1 mg/l, 0.11 mg/l, 105 mg/l and 18815 mg/l, respectively. He further informed that PETS has failed to stick to the timelines for upgradation/modification of existing CETP of 5 MLD as the DPR has yet not been appraised by CLRI, Chennai.

Chairman of the Monitoring Committee directed the Chairman Interim Committee for PETS that the DPR may be got appraised and upgrade/modification of existing CETP shall be made to meet with the prescribed standards by 31.03.2020.

(ii) Installation of EMF Meter at the outlet of CETP, Leather Complex:

Punjab Pollution Control Board informed that EMF Meter at the outlet of CETP, Leather Complex has been installed.

(iii) pH measuring sensor to be installed into OCEMS

It was informed that the system was put in place, but the same is yet to be calibrated.

(iv) Connectivity of OCEMS with CPCB & Punjab Pollution Control Board server

Connectivity has been made with the Central Pollution Control Board and Punjab Pollution Control Board server, but the system is not showing the data and the same has been sent to the vendor for checking the system.

(v) Regular lifting of sludge by PETS

It was informed that the sludge generated from the CETP is being regularly shifted to TSDF, Nimbuan.

3. 100 MLD STP, Pholriwal

Upgradation/rehabilitation of existing UASB system, Status of operation of existing components of STP and Utilization of bio gas of UASB system.

It was informed that the matter is yet to be decided as to whether the present UASB based STP of capacity 100 MLD is to be upgraded/rehabilitated or new STP based on new technology is to be set up.

Chairman of the Monitoring Committee directed that the matter of upgradation/rehabilitation or installation of new STP based on new technology at Pholriwal may be taken up in the next State level meeting for which the necessary agenda may be prepared by the Nodal Officer on behalf of the Deptt. of Environment, Govt. of Punjab and shall be placed in the meeting.

4. Restricted supply fresh water for domestic usage to the residents of Jalandhar city to reduce wastewater discharge

Sant Seechewal raised the issue that presently about 250-300 lpcd water is used in Jalandhar instead of norms of 135 lpcd resulting in generation of huge quantity of discharge of effluent and more hydraulic load on the existing STPs. He opined that in case the water supply is regulated and supplied uniformly to all the inhabitants of the towns, the quantity of sewage shall be less and present capacity of STP may be sufficient to treat the wastewater.

The matter was discussed in detail and Chairman of the Monitoring Committee decided as under:

- The detailed plan w.r.t. regulated and uniformed supply of water to be given to the residents of Jalandhar may be prepared by M.C., Jalandhar by 31.08.2019.
- Work may be started on 01.09.2019.
- Whole exercise shall be completed by 30.11.2019.

A detailed report, the matter may be submitted to the Monitoring Committee on 01.12.2019.

5. Field visit by the Monitoring Committee

The members of the Monitoring Committee, Officers of Punjab Pollution Control Board, M.C. Jalandhar, PWSSB & PSIEC made joint visit at the following areas:

(i) **STP Peer Daad (50 MLD capacity):**

It was observed that as under:

- The mechanical screening system of STP was not functioning resulting in accumulation of floating material in the main collection tank, which hampers the functioning of STP.
- Sludge dewatering system was found inadequate.
- The performance of the STP seems to be reduced as the physical appearance of the treated effluent was turbid.
- Low quantity of sludge is being generated as expected from such treatment system.

Member of the Monitoring Committee desired as under:

- The detailed study w.r.t. each components of STP may be carried by PWSSB by 15.08.2019.
- All the necessary rectifications may be made by 31.08.2019.
- Punjab Pollution Control Board shall monitor the STP in the first week of September, 2019.

(ii) **M/s Metro Milk Products Ltd., Sports & Surgical Goods Complex, Jalandhar**

The industry processes milk about 1,00,000 ltr/day on average for manufacturing milk products. The components of ETP consisting of collection tank, aerobic biological treatment system, tube settler and filtration system were in operation. Effluent sample from final outlet of ETP and from aeration tank were collected for analysis of parameters as prescribed for Milk Plant and MLVSS & MLSS in the aeration system. The visual observation indicates that the quality of treated effluent sample was found to be almost clear in colour. However, the approach to the ETP is not easily accessible.

Therefore, the Committee directed the owner of the industry to make the ETP easily approachable and accessible to facilitate the regulating body for effective monitoring of the components of the ETP.

(iii) M/s Kalsi Pumps Pvt. Ltd., Sports & Surgical Goods Complex, Jalandhar

The industry is engaged in the manufacturing of bathroom fitting items by involving various machining & electroplating processes. Collection Sintex tank of capacity 10,000 ltr has been provided to collect the effluent generated from the electroplating section.

The representative of the industry shown his record w.r.t. lifting of effluent by M/s JBR Technology Ltd., Ludhiana and fresh water consumption.

After examining the record, the Committee observed that there is need to conduct comprehensive water audit of the industry to verify the quantity of effluent discharged by the industry and lifted by M/s JBR Technology and ensured that these quantities should be matching to each other.

The Monitoring Committee directed Punjab Pollution Control Board to carry out comprehensive water audit w.r.t. fresh water consumption, water losses in the electroplating process, quantity of wastewater generation, quantity of effluent lifted and the remaining quantity left in the collection chamber. The possibility of installation of metering system on all these points may also be explored.

(iv) Meeting with Rubber Manufacturer Association, Jalandhar

During visit to the Kala Singhian drain, the member of the Committee observed that lot of rubber waste was found thrown along the said drain. Therefore, the meeting was held with the Rubber Manufacturing Association, Jalandhar.

Association was asked to get lift the rubber waste and disposed off the same scientifically and it may be ensured that no waste is thrown along the bank of Kala Singhian Drain. The Association should also keep strict vigil on the disposal of rubber waste and list of the culprits may be supplied to PPCB take legal action against them.

6. Other issues

i) **Survey of Kala Singhian drain**

During the meeting, it was informed that the most of the outlets have been plugged but during the visit to Kala Singhina Drain near STP Peer Daad, the Committee observed that the quantity of effluent flowing into the drain was quite high, therefore, the Committee decided as under:

Complete survey of Kala Singhian Drain from its origin point to the downstream of STP Peer Daad may be conducted by PPCB, Jalandhar within 15 days. During the survey, the effluent samples from points sources may be collected for analysis of various parameters. The discharge of these all point sources may also be measured. Including the discharge from 50 MLD STP Peer Daad. The quantity of cumulative discharge flowing into Kala Singhian Drain to be measured at the downstream of the outlet of 50 MLD Basti Peer Daad STP may be compared with the total discharge of various outlets entering into the Kala Singhian Drain so as to ascertain the plugging of the outlets falling into Kala Singhian Drain.

ii) **Funds arrangements for operation and maintenance of STPs by M.C., Jalandhar.**

During survey to STP, Basti Peer Daad (50 MLD), the representative of Contractor, operating of ETP, informed that MC Jalandhar has not made any payment for the last 6 months and the Company is operating STP at its own cost. The Committee felt that there is need to get reserve the funds for operation and maintenance of STPs of Jalandhar for its regular and interrupted operation. Fund flow system may also be linked with GST share received by M.C, Jalandhar.

The Monitoring Committee decided that Chief Environmental Engineer, Jalandhar shall take up the matter with Commissioner, Municipal Corporation, Jalandhar and he will also corroborate the funds status with GST share received by M.C., Jalandhar.

ANNEXURE-4

Report on visit to common effluent plant of capacity 25MLD installed at village Kenduwal Mallpur, P.O. Bhud, Tehsil Baddi, Distt. Solan (HP) for treatment of effluent of industries of Baddi, Barotiwala and Nalagarh area on 9.9.2019 by 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.

The following were present during the visit:

a) **Members of the Monitoring Committee:**

Sr. No.	Name and Designation	Designation in the Committee.
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court, Chandigarh.	Chairman
2.	Sh. S.C. Agrawal, IAS, Former Chief Secretary, Punjab	Senior Member
3.	Dr. Babu Ram, Former Member Secretary, PPCB	Member

b) **Officers of Punjab State Pollution Control Board**

Sr. No.	Name and Designation
1	Sh. R.K Ratra, Senior Environmental Engineer, Punjab Pollution Control Board, Patiala
2	Sh. Gurkaran Singh, Asst. Environmental Engineer, Punjab Pollution Control Board, Patiala
3	Sh. Charan Singh, Junior Scientific Officer, Punjab Pollution Control Board, Patiala

c) **Officers of Himachal Pradesh State Pollution Control Board**

Sr. No.	Name and Designation
1	Sh. Parveen Gupta, Senior Environmental Engineer, Himachal Pradesh State Pollution Control Board, Baddi (HP)
2	Sh. Pawan Sharma, Junior Environmental Engineer, Himachal Pradesh State Pollution Control Board, Baddi (HP)

1.0 Background

In the State of Himachal Pradesh, 3 major industrial towns namely Baddi, Barotiwala and Nalagarh are there, where various categories of industries are in operation. The details of the industries are as under:

S. n o.	Category of industries	No. of Industries	Effluent discharge (MLD)	Category of effluent discharged by the industries	System of conveying effluent to CETP
1	Food industries, light textile dyeing industries and paper industries	89	14 MLD	Category-1	Effluent of food industries, light textile dyeing industries and paper industries is carried through common conveyance system
2	Soap & Detergent	109	0.7	Category-2	Through separate conveyance system
3	Pharmaceuticals <ul style="list-style-type: none"> • Formulation • Bulk drug 	[211(Formulation)+1(Bulk Drug)]	2.5 MLD	Category-3	Through separate conveyance system
4	Textile Dyeing industries (discharging concentrated dye effluent)	2	2.5 MLD	Category-4	Through common conveyance system for category-1 effluent because conveyance line meant for category-4 effluent was checking.
5	Electroplating & Metal Surface Treatment	31	0.08 MLD	Category-5	Through tankers

The effluent of these industries is brought out to CETP through following two mechanisms

- 95 % through Pipeline
- 5 % through tankers from the area mainly Kishanpura, Manpura & some industries of Nalagarh area.

Himachal Pradesh State Pollution Control Board (HPSPCB) has granted consent to operate under the provisions of the Water Act, 1974 to M/s Baddi Infrastructure, Village Kenduwal Mallpur, Tehsil Baddi, Distt. Solan, vide no. 2018-22 dated 14.05.2015 and further renewed vide no. 18049-51 dated 23.09.2018 valid upto 31.03.2020. It is mentioned here that the Govt. of HP vide notification dated 17.03.2018 has notified inlet quality effluent standards for CETP for the parameters pH, TSS and Oil & Grease. The CETP Baddi is being regularly monitored and inspected

by HPSPCB through its Regional Office, Baddi. However, there is fluctuation in the TDS & Chloride values and Complaints are received from nearby areas regarding generation of odour emissions by CETP. Based on the analysis results of the last 3 consecutive effluent samples, notices for violations have been issued to M/s Baddi infrastructure vide no. 523-24 dated 19.08.2019 and no. 665-67 dated 11.09.2019 and to the member industries vide no. 674-94 dated 11.09.2019.

Show cause notice has also been issued to M/s Baddi Infrastructure by the office of Member Secretary, HPSPCB, Shimla vide no. 18831-33 dated 31.08.2019. HPSPCB, Regional Office, Baddi has submitted action taken report to Head office vide no. 644 dated 07.09.2019 and no. 645 dated 07.09.2019. The committee has been constituted by HPSPCB, Head Office, Shimla order no. 20207-10 dated 19.09.2019 to undertake a comprehensive study of the CETP and to suggest remedial measures to improve the working of CETP and direction to Regional office, Baddi to assess and levy the environmental compensation upon the violation committed by the M/s Baddi Infrastructure (CETP) Baddi, Distt. Solan, HP.

Ministry of Environment, Forest and Climate Change has notified inlet effluent quality standards and treated effluent quality standards for common effluent treatment plants (CETP) vide its notification dated 01.01.2016. Also, the Govt. of Himachal Pradesh vide its notification dated 17.03.2018 has notified inlet effluent quality standards for CETP for three parameters namely pH, TSS and Oil & Grease and the same have been prescribed as 6.5-9.0, 250 mg/l and 30 mg/l, respectively.

2.0 Visit to CETP of capacity 25 MLD

Sh. Pola Ram Chaudhary, Pardhan and other Panchayat members of Village Mallpur, P.O. Bhud, Tehsil Baddi, Distt. Solan have made complaint against CETP, Baddi, wherein, it has been mentioned that the untreated / partially treated effluent of CETP having black colour is being discharged into Sarsa river and has degraded the quality of river Sarsa, affecting the water sources of nearby areas including facing of odour problem by the residents (copy of the complaint is enclosed as **Annexure-1**). Therefore, the Monitoring Committee visited CETP of capacity 25 MLD installed at village Kenduwal Mallpur, P.O. Bhud, Tehsil Baddi, Distt. Solan (HP) on 9.9.2019. The components of CETP are mentioned as under:

2.1 Collection tanks:

- 1) Collection tanks: 3 nos, for category-1 effluent.
- 2) Collection tanks: 3 nos, for category-2, category-3 and category-4 effluent.
- 3) Collection tank: 1 no. for category-5 effluent only.

2.2 Aerobic biological treatment system

The treatment system provided at the CETP consist of following components

- 1) Aeration tank: 3 nos. each for effluent of category-1, 2 and 3.

- 2) Secondary clarifiers.
- 3) Tertiary treatment through physico-chemical treatment.
- 4) Separate Physico-chemical treatment to electroplating effluent (without zero liquid discharge technology).

3.0 Collection of Effluent Samples

- 1) As per the information supplied by the Vice President, CETP, presently, no effluent from electroplating industries (category-5) has been started reaching at CETP. However, one collection and one reaction tank have been provided **(Photograph shown as Plate-1)**. Since these tanks were found containing some effluent / water, as such, the effluent / water samples from both of these tanks were collected.



Plate-1 : photograph showing collection and reaction tank for category 5 effluent (Electroplating effluent)

- 2) Effluent samples from the following other equalization-cum-collection tanks / components of CETP were also collected:
 - i. Equalization-cum-collection tank for collection of concentrated dyeing effluent (Category 4). On the day of visit, there was very small quantity of inflow in the tank resulting in no outflow from the tank was observed.
 - ii. Equalization-cum-collection tank for collection of pharmaceutical effluent (Category 3). On the day of visit, there was very small quantity of inflow resulting in no outflow from the tank was observed.
 - iii. Equalization tank-cum-collection tank for collection of Soap and Detergent effluent (Category 2). On the day of visit, there was very small quantity of inflow from pipeline was observed, but tankers were being unloaded in the tank and no outflow from the tank was observed.
 - iv. Equalization tank-cum-collection tank for collection of food, light textile dyeing industries and paper industries effluent (Category 1). On the day of visit, sufficient quantity of inflow was observed and effluent was being lifted for further treatment.
 - v. Pre settler tank-1,
 - vi. Aeration tank-1
 - vii. Recirculation system having mechanism of re-circulation of underflow of secondary clarifier into aeration tank-1.

viii. Aeration tank-3.

ix. Recirculation system having mechanism of recirculation of underflow from secondary clarifier into aeration tank-3.

Photograph showing the aeration tank for treatment of category-3 effluent is mentioned as per **plate-2**

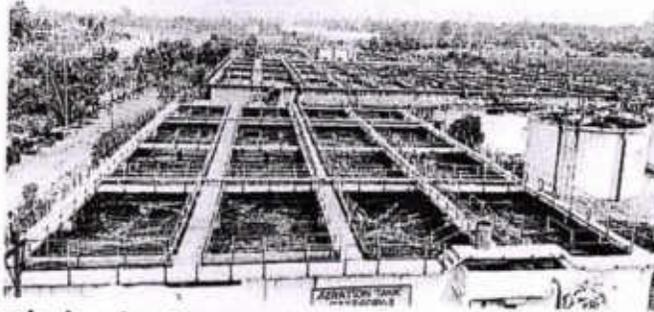


Plate-2: Photograph showing the aeration tank for treatment of category-3 effluent.

x. Secondary clarifier-1.

xi. Final outlet of tertiary clarifier.

xii. Final outlet of CETP leading to River Sarsa.

Photograph showing the Poor quality of effluent passing through broken pipeline and entering into Sarsa River (**plate-3 & 4**).



Plate-3



Plate-4

Plate 3 & 4: Photograph showing the Poor quality of effluent through broken pipeline entering into Sarsa River

xiii. Untreated domestic sewage of Baddi Town entering into river Sarsa. Photograph showing untreated domestic sewage of Baddi Town entering into Sarsa River is mentioned as per **plate-5**.

Bel



Plate-5: photograph showing untreated domestic sewage of Baddi Town entering into Sarsa River

These effluent samples were sent to Punjab Pollution Control Board, Head Office, Lab Patiala for analysis. The analysis results are mentioned as per Table -1 (in Part A & B) given below:

Part-A

Table-1: Analysis results of the effluent samples

Sr. No.	Parameters	pH	Chemical Oxygen Demand mg/l	Bio-chemical Oxygen Demand mg/l	Total Suspended Solids mg/l	Total Dissolved Solids mg/l	*Oil & Grease mg/l	*Sulphide mg/l	*Phenols mg/l	*Ammonical Nitrogen mg/l
1	Equalization tank(Category 5 Tank-1)	7.5	-	-	6	5501	-	-	-	-
2	Equalization tank(Category 5 Tank-2)	7.4	-	-	BDL	3423	-	-	-	-
3	Equalization tank(Category 4) For concentrated dyeing Effluent	8.6	1289	490	224	-	BDL	9.6	BDL	98
4	Equalization tank(Category 3)	7.3	840	294	242	-	BDL	21.6	BDL	82
5	Equalization tank(Category 2) Soap & Detergent	7.1	1450	498	202	-	BDL	32.0	BDL	BDL
6	Equalization tank(Category 1) Food textile & Paper	7.9	281	96	194	2809	BDL	6.4	BDL	41
7	Pre-treatment tank -1	7.7	458	170	214	2838	BDL	20.8	BDL	58
8	Aeration Tank-1	-	-	-	-	-	-	-	-	-
9	Recirculation of Aeration tank-1	-	-	-	-	-	-	-	-	-
10	Aeration Tank-3	-	-	-	-	-	-	-	-	-
11	Recirculation of Aeration tank-3	-	-	-	-	-	-	-	-	-
12	Secondary Clarifier -1	8.0	394	136	151	2915	BDL	8.8	BDL	34
13	Final outlet of tertiary clarifier	7.4	361	131	120	3138	BDL	6.4	BDL	14
14	Final outlet of CETP leading to River Sarsa	7.5	238	90	118	2697	BDL	5.6	BDL	4.9
15	Domestic sewage of Baddi town leading to river Sarsa	7.7	98	36	63	948	-	-	-	-

Part-B

Table-1: Analysis results of the effluent samples

Sr. No.	Parameters	*Cyanide mg/l	*Phosphate mg/l	*Bioassay	*Mixed Liquid Suspended Solids mg/l	*Mixed Liquid Volatile Suspended Solids mg/l	Total Chrome mg/l	Iron mg/l	Zinc mg/l	*Hexachrome mg/l	Nickel mg/l	*Lead mg/l
1	Equalization tank(Category 5 Tank-1)	-	-	-	-	-	BDL	0.12	0.32	BDL	BDL	BDL
2	Equalization tank(Category 5 Tank-2)	-	-	-	-	-	BDL	BDL	0.10	BDL	BDL	BDL
3	Equalization tank(Category 4) For concentrated dyeing Effluent	BDL	3.2	-	-	-	BDL	-	-	-	-	-
4	Equalization tank(Category 3)	BDL	2.7	-	-	-	BDL	-	-	-	-	-
5	Equalization tank(Category 2) Soap & Detergent	BDL	0.5	-	-	-	0.31	-	-	-	-	-
6	Equalization tank(Category 1) Food textile & Paper	BDL	6.2	-	-	-	BDL	-	-	-	-	-
7	Pre-treatment tank -1	BDL	3.8	-	-	-	BDL	-	-	-	-	-
8	Aeration Tank-1	-	-	-	3840	2830	-	-	-	-	-	-
9	Recirculation of underflow into Aeration tank-1	-	-	-	4120	2960	-	-	-	-	-	-
10	Aeration Tank-3	-	-	-	2620	1700	-	-	-	-	-	-
11	Recirculation of underflow into Aeration tank-3	-	-	-	3210	2280	-	-	-	-	-	-
12	Secondary Clarifier -1	BDL	4.3	0 % Survival of Fish in 100% effluent after 96 hours	-	-	BDL	-	-	-	-	-
13	Final outlet of tertiary clarifier	BDL	5.4	0 % Survival of Fish in 100% effluent after 96 hours	-	-	BDL	-	-	-	-	-
14	Final outlet of CETP leading to River Sarsa	BDL	3.4	0 % Survival of Fish in 100% effluent after 96 hours	-	-	BDL	-	-	-	-	-
15	Domestic sewage of Baddi town leading to river Sarsa	-	-	-	-	-	-	-	-	-	-	-

These analysis results are annexed as per **Annexure-2**.

3.1 Discussion on the analysis results

Since in the equalization tanks provided for collection and physico chemical treatment were found containing effluent/ water other than electroplating effluent, as such, the

analysis results of effluent samples collected from these tanks indicate the value of TDS as 3423-5501 mg/l which shows that CETP operator might have stored some rejects from filtration system in these tanks.

The analysis results of the effluent sample collected from equalization tank containing concentrated dyeing effluent (Category-4) indicate that the values of BOD, COD, TSS and Sulphide were found to be 490 mg/l, 1289 mg/l, 224 mg/l and 9.6 mg/l, respectively. The effluent sample from equalization tank, containing category 3 effluent (pharmaceutical effluent), was analyzed for the parameter namely BOD, COD, TSS, Sulphide and heavy metal and the values of these parameters were observed as 294 mg/l, 840 mg/l, 241 mg/l and 21.6 mg/l, respectively.

Effluent sample from Category 2 effluent, stored in the equalization tank, was analyzed for the parameters namely BOD, COD, TSS and Sulphide and the values of these parameters were found as 498 mg/l, 1450 mg/l, 202 mg/l and 32 mg/l, respectively. Category-1 effluent, which is being generated from food, textile industries and paper industries was found containing BOD: 96 mg/l, COD: 281 mg/l, TSS: 194 mg/l and Sulphide: 6.4 mg/l. As per the information supplied by the representative of CETP, category 1 effluent (food, textile and paper) is taken into equalization tank and further for clarification into pre-settling tank-1 or primary clarifier-1 and further leading to aeration tank-1 for its aerobic biological treatment. The concentration of MLSS and MLVSS in aeration tank 1 was observed as 3840 mg/l and 2830 mg/l, respectively, and the concentration of MLSS and MLVSS in the underflow of secondary clarifier 1 leading to aeration tank 1 was 4120 mg/l and 2960 mg/l, respectively, which is quite less as compared to expected values of MLSS as 8000 to 10000 mg/l. This represents that the settling of biomass (MLSS or MLVSS) in secondary clarifier 1 is not proper.

P-2
The analysis results further indicate that the values of BOD, COD and TSS were found to be reduced from 170 mg/l, 458 mg/l and 214 mg/l (pre-treated effluent) to 136 mg/l, 394 mg/l and 151 mg/l (outlet of secondary clarifier-1), respectively. The treatment efficiency of the aerobic biological treatment system 1 was observed as 20%, 14 % and 29.4 %, respectively, which is very low as expected from such treatment system. As such, the functioning of aeration tank 1 and secondary clarifier-1 is very poor and ineffective.

The representative of the CETP further claimed that no substantial quantity of effluent (category 2, category 3 and category 4) was available for treatment. Therefore, no treatment through primary clarifier, aeration tank, secondary clarifier and tertiary treatment was being imparted to these streams. However, the analysis results indicate that the industry must be carrying some quantity of effluent either from category-2 or category-3 or category-4 effluent alongwith effluent of category-1 effluent into pre-treatment system as the value of BOD, COD and TSS at the outlet of pretreatment

system-1 were observed as BOD-170mg/l, COD-458mg/l and TSS-214mg/l and the same were higher than the values of these parameters in the effluent of collection tank for category-1 which were BOD: 96mg/l, COD: 281mg/l and TSS: 194mg/l Therefore, after pre-treatment-1, the effluent was being treated in aerobic biological treatment followed by tertiary treatment. Parameters namely BOD, COD, TSS, TDS, Sulphide, Phosphate and Bioassay at the outlet of the tertiary clarifier have been reported as 131mg/l, 361 mg/l, 120mg/l, 3138 mg/l, 6.4 mg/l and 0% survival of fish in 100% effluent after 96 hours, respectively, and these analysis results were beyond the prescribed standards. The treatment efficiency of the tertiary clarifier in terms of removal of BOD, COD and TSS was found to be 3.6 %, 8.3 % and 20.5%, respectively, which is very low. Further, the values of BOD, TSS, TDS, Sulphide and Bioassay at the final outlet of CETP leading to River Sarsa observed as 90mg/l, 118 mg/l, 2697 mg/l, 5.6 mg/l and 0% survival of fish in 100% effluent after 96 hours, respectively, were also beyond the prescribed limits.

It is mentioned here that despite there is no treatment mechanism / components in between outlet of tertiary clarifier and outlet into Sarsa river, still the parameters at final outlet of CETP leading to river Sarsa were found to be reduced from 361 mg/l to 238 mg/l as COD, 131 mg/l to 90 mg/l as BOD. This implies that the CETP operator might have made some dilution system in between the outlet of tertiary clarifier and final out of CETP leading to river Sarsa. The summary of parameters at the final outlet of tertiary clarifier and final outlet of CETP is given as under:

Sr. No.	Parameters	Final outlet of Tertiary clarifier Concentration	Final Outlet of CETP leading to River Sarsa	Prescribed Standards
1.	pH	7.4	7.5	6-9
2.	COD mg/l	361	238	250
3.	BOD mg/l	131	90	30
4.	TSS mg/l	120	118	100
5.	TDS mg/l	3138	2697	2100
6.	O & G mg/l	BDL	BDL	10
7.	Sulphide mg/l	6.4	5.6	2
8.	Phenols mg/l	BDL	BDL	1
9.	Ammonical Nitrogen mg/l	-	4.9	50 (for textile industry)
10.	Cyanide mg/l	BDL	BDL	0.2
11.	Phosphate mg/l	5.4	3.4	5
12.	Bioassay	0 % Survival of Fish in 100 % effluent after 96 hours	0 % Survival of Fish in 100 % effluent after 96 hours	90 % Survival of Fish in 100 % effluent after 96 hours
13.	Total Chrome mg/l	BDL	BDL	2 (for textile industry)

From the above table, it is clear that the values of BOD: 90 mg/l, TSS : 118 mg/l, TDS: 2697 mg/l, Sulphide: 5.6 mg/l and Bioassay test (0 % Survival of Fish in 100 % effluent

after 96 hours) at the final outlet of CETP leading to river Sarsa are higher than the permissible limits of BOD: 30mg/l, TSS: 100mg/l, TDS: 2100 mg/l and Bioassay test (90% Survival of Fish in 100 % effluent after 96 hours).

4.0 Observations of the monitoring committee

1. As per the representative of the CETP, equalization tanks meant for category-2 and 3 effluent, have no outflow due to less inflow from respective industries, due to weekend off (Sunday) and less receipt of effluent from industries. Also, less quantity of effluent is being received in equalization tank for category 4 (concentrated dyeing effluent) due to choking of conveyance line. Therefore, this effluent is also being received from other conveyance line meant for category 1.
2. As per the representative of CETP, regular effluent is not being received for category-5 (electroplating). Thus, no treatment is imparted for this category of effluent. It was further informed that treatment system for electroplating wastewater has recently been commissioned without zero liquid discharge technology. It has been claimed that electroplating units have provided their captive ETPs and these units might be sending their treated effluent to CETP.
3. Some of the components of the CETP were not in operation. The representative of CETP claimed that the CETP has been designed for 25 MLD capacity but presently, average inflow of effluent is about 13-15 MLD. Moreover, due to Sunday holiday, prior to visit of the Committee on 9/9/2019 (Monday), less quantity of effluent was received at the CETP site. The operational status of components of CETP is as under:
 - a) Pre-treatment-1, Aeration tank-1, Secondary clarifier-1 and tertiary clarifier were in operation.
 - b) There was negligible flow from aeration tank-3 and secondary clarifier-3. The representative of the CETP claimed that due to less inflow, these components are not being operated regularly.
 - c) Aeration tank-2 and Secondary clarifier-2 (for the treatment of category-2 effluent) were not in operation. The representative of CETP informed that due to less flow of effluent of category-2 & 3, these components are not being operated.
 - d) Only one collection and one reaction tank have been provided for electroplating effluent. However, at the time of visit, no effluent from electroplating industries was found at site for its treatment. M/s Baddi Infrastructure has to provide zero liquid discharge technology to treat electroplating effluent which is toxic in nature.
 - e) Sludge thickener and decanter were in operation and semisolids sludge was being transferred through tipper to TSDF (Sivalik Solid Waste Management Limited). No separate sludge drying beds / further arrangements for drying of sludge have been provided at CETP site.

4. The analysis results of the effluent samples collected from final outlet of tertiary clarifier further leading to final outlet of CETP to discharge treated effluent into Sarsa River indicate the values of COD: 238-361 mg/l, BOD: 90-131 mg/l, TSS:118-120 mg/l, TDS:2697-3138 mg/l, Sulphide: 5.6-6.4 mg/l and 0% survival of fish in 100% effluent after 96 hours. These values are higher than the permissible values of COD: 250 mg/l, BOD: 30 mg/l, TSS: 100 mg/l, TDS: 2100 mg/l, Sulphide: 2 mg/l and Bioassay: 90 % survival of fish in 100% effluent in 96 hours. These analysis results indicate that either the CETP is not being operated properly or it is inadequate to treat the effluents to the prescribed standards. Some of the malfunctioning/drawbacks observed in the functioning of CETP are as under:

- a) CETP has been designed for treatment of 5 categories of effluents i.e food industries, light dyeing industries and paper industries; soap & detergent; pharmaceutical (formulation & drug); textile dyeing (concentrated dye effluents) and electroplating / metal surface treatment considering their nature (inorganic / organic / high or low concentrated streams). However, treatment is not being imparted as per the above scheme. Presently, effluents from various streams were being mixed and were treated in aeration tanks/clarifiers. **As such, very purpose of collecting different effluents streams in different collection tanks/equalization tank is defeated and no specific treatment has been designed for specific nature of influent.**
- b) Although the concentration of MLSS and MLVSS in aeration tank 1 is 3840 mg/l and 2830 mg/l, respectively, but the concentration of MLSS and MLVSS in the underflow of secondary clarifier 1 returning to aeration tank 1 was found to be 4120 mg/l and 2960 mg/l, respectively, which is quite less as expected (MLSS: 8000-10000 mg/l). It shows that the settling of Biomass in secondary clarifier 1 was not proper.
- c) As there is negligible inflow and outflow in aeration tank 3 and secondary clarifier 3, the concentration of MLSS and MLVSS was observed to be 2620 mg/l and 1700 mg/l, respectively. Further, the concentration of MLSS and MLVSS in the underflow of secondary clarifier-3 returning to aeration tank-3 was observed as 3210 mg/l and 2280 mg/l, respectively, which is quite low as expected (MLSS: 8000-10000mg/l) It indicates that the settling of Biomass in secondary clarifier-3 was not proper.
- d) The concentration of parameters in the domestic sewage of Baddi Town leading to River Sarsa was observed to be pH 7.7, BOD: 36 mg/l, COD:98 mg/l, TSS:63mg/l, TDS: 948 mg/l and these low values of BOD, COD & TSS may be due to dilution with fresh water or mixing with other low polluting streams somewhere at upstream. **However, Deptt. of Irrigation and Public Health Engineering of State of Himachal**

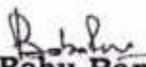
Pradesh has to provide separate STP for treatment of sewage of Baddi town.

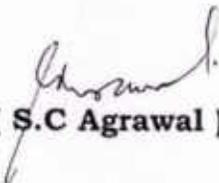
5. Ministry of Environment & Forest, Govt. of India has granted Environment Clearance (EC) on 08.01.2013 for development of proposed CETP and recovery plant at Kainduwal, Himachal Pradesh by M/s Baddi Infrastructure. However, the observations w.r.t environmental clearance are as under:
- a) Environment Clearance granted to M/s Baddi Infrastructure, Baddi for CETP indicated that the treated wastewater was proposed to be discharged into River Sarsa for which MoEF has suggested to obtain status report from SPCB alongwith comments.
 - b) The Irrigation Department and Public Health Engineering Deptt. of Himachal Pradesh had suggested that disposal point of CETP shall be 800 meter downstream of intake points of irrigation scheme.
 - c) The environment clearance was granted subject to the condition that NOC from HPSPCB under Water Act, 1974 and Air Act, 1981 shall be obtained before start of construction activity of CETP at site.
 - d) Member industries with effluent discharge more than 200 KLD shall treat their effluent in their existing ETPs to achieve the prescribed standards at inlet to CETP.
 - e) The project proponent shall setup separate Environmental Management Cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
6. Presently, the effluent of the CETP, not conforming to the standards, is being discharged into Sarsa River leading to River Satluj. As such, the effluent of CETP is affecting the aquatic life. Therefore, M/s Baddi or CETP operator Infrastructure, Baddi has to adopt Zero Liquid Discharge Technology (ZLD) and it may not be allowed to discharge its treated / untreated effluent into river Sarsa further leading to river Sutlej.
7. Online Continuous Effluent Monitoring Systems (OCEMS) was not in working condition. No records of online monitoring, if any maintained, were produced before the Committee.
8. CCTV cameras for e-surveillance were not found installed at any component / inlets / outlets of the CETP.
9. Further, no mechanism like GPS system has been put in place to track the movement of the vehicles / tankers transporting effluent to CETP so to avoid its indiscriminant disposal of effluents.

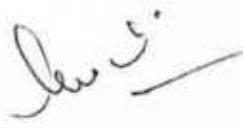
5.0 Recommendations

1. Since the outlet of CETP has been maintained to discharge its effluent into Sarsa River further leading to River Sutlej and CETP is not meeting with the prescribed standards for the parameters namely BOD, TSS, TDS, Sulphide and Bioassay. As such, it degrades the quality of water of Sarsa River exorbitantly and also affects aquatic life. Therefore, an environmental compensation amounting to Rs.1.00 crores may be imposed upon the industry. In case any Bank Guarantee earlier submitted by the CETP operator/SPV, Baddi, the same may also be encashed. Accordingly, the Chairman, Himachal Pradesh Pollution Control Board shall issue necessary orders/ directions under the provisions of the Water Act, 1974 w.r.t. imposition of the said environmental compensation and encashment of Bank guarantee. The said environmental compensation amount may be utilized for rejuvenation of water quality of River Sarsa and subsequently River Sutlej.
2. M/s Baddi Infrastructure, Baddi, the SPV or CETP operator shall upgrade its CETP with Zero Liquid Discharge Technology within 6 months to achieve Zero Liquid Discharge and ensure that no treated/untreated effluent is discharged into Sarsa River further leading to river Sutlej.
3. The Chairman, Himachal Pradesh Pollution Control Board shall get performance guarantee amounting to Rs. 50.00 lakhs to ensure that CETP is upgraded to achieve the zero liquid discharge in a time bound manner and necessary directions under the provisions of the Water Act, 1974 shall be issued by Chairman, HPSPCB to SPV namely M/s Baddi Infrastructure, Baddi and CETP Operator.
4. The Chairman, Himachal Pradesh Pollution Control Board shall revoke the consent, if granted, under the provisions of Water Act, 1974.
5. Since the pretreatment systems are to be provided by member industries, as such, the sludge / solid waste generated from pretreatment system of these industries may not be allowed to be sent to CETP site. The hazardous waste generated from pre-treatment system of the member industries shall be sent to nearby TSDF by individual industries.
6. SPV/ CETP operator shall install electromagnetic flow meter at the inlet and outlet of the collection tank. After installation of zero liquid discharge technology, the recovered effluent from CETP shall be recycled back into the processes of the industry and the residue in the form of hazardous sludge after drying into the drier shall be sent to nearby TSDF.
7. An environmental management cell including NGOs and Civil Society may be setup by SPV/ CETP operator. In the Environmental Management Cell, the qualified Engineers/Scientists shall also be employed by SPV/CETP operator.
8. All the tankers deployed for collection of effluent from member industries may be provided with GPS system having its connectivity at CETP site and HPPCB site.

9. Online Continuous Effluent Monitoring Systems (OCEMS), which was not in operation on the day of visit, shall be got calibrated and made operational within 15 days and the system shall have its connectivity with HPPCB and CPCB Servers.
10. Necessary CCTV cameras, for e-surveillance of the various components of CETP, shall be installed by SPV/CETP operator within 15 days and these cameras shall have its connectivity with HPSPCB server.
11. The Chairman, Himachal Pradesh Pollution Control Board shall take up the matter with the Department of Irrigation and Public Health Engineering for early installation of Sewage treatment Plant for the treatment of the sewage of the town.


(Dr. Babu Ram)


(S.C Agrawal)


(Justice Pritam Pal)
Former Judge,
Punjab and Haryana High Court

ANNEXURE-5

Report on visit to industries of Gaunspur (Ludhiana) area on 11.09.2019 by the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no. 916 of 2018 in the matter of Sobha Singh and Ors. V/s State of Punjab & Ors.

The following were present during the visit:

A) Members of the monitoring committee

Sr. no.	Name & Designation	Designation in the committee
1	Justice Pritam Pal, former judge, Punjab & Haryana High Court	Chairman
2	Sh. S.C. Agarwal, IAS, Former Chief Secretary, Punjab	Senior Member
3	Sant Balbir Singh Seechewal	Member
4	Dr. Babu Ram, Former Member Secretary, PPCB, Punjab	Member

B) Officers of Punjab Pollution Control Board:

Sr. no.	Name & Designation
1	Sh. Gulshan Rai, Chief Environmental Engineer
2	Sh. Sandeep Behl, Senior Environmental Engineer
3	Sh. R. K. Ratra, Senior Environmental Engineer
4	Sh. Parmjeet Singh, Environmental Engineer
5	Sh. Ashok Garg, Environmental Engineer
6	Sh. Amandeep Singh, Assistant Environmental Engineer
7	Sh. Bachanpal Singh, Assistant Environmental Engineer
8	Sh. Navtresh Singla, Assistant Environmental Engineer
9	Sh. Aushpreet Singh, Assistant Environmental Engineer
10	Sh. Jaspal Singh, Assistant Environmental Engineer
11	Sh. Shankarjit Singh, Junior Scientific Officer
12	Sh. Charan Singh, Junior Scientific Officer
13	Sh. Baldeep Singh, Scientific Assistant

1.0 Visit to the industries

The monitoring committee alongwith officers of Punjab Pollution Control Board visited the following industries:

1.1 Saber Paper Board Pvt. Ltd., Vill. Gaunpur, Hambran Road, Ludhiana

The industry is engaged in the manufacturing of kraft paper @40 TPD by using waste paper as raw material and Rosin, ferro alums as chemicals. The manufacturing processes of the industry are pulping, paper sheet formation, pressing, drying, reeling, cutting and packing.

As per the record of Punjab Pollution Control Board, the industry is small scale red category unit. It has been refused consent to operate under the provisions of the Water Act, 1974 on 17.06.2019 mainly on the following reasons:

- i) Clarifier was found choked and purge water was found leaking from the pipes, causing stagnation.
- ii) Borewell was found, which was plugged with temporary arrangements and physical condition indicated that it is in operational condition.

1.1.2. Observations of the monitoring committee

During visit, the monitoring committee made the following observation:

1. Due to the above violations, the industry has been issued directions by Punjab Pollution Control Board on 18.06.2019 for its closure u/s 33-A of the Water Act, 1974 along with disconnection of electric connection available with the industry.
2. PSPCL has also been directed by Punjab Pollution Control Board on 18.06.2019 to disconnect the electric connection of the industry.
3. During visit, it was observed that the industry seems to be in operation because scraper mechanism provided on the clarifier of ETP was in operation. But, the clarifier was found in overflowed condition because the weir of the clarifier was submerged (**Plate-1 & 2**).



Plate-1



Plate-2

Plate-1 & 2: Photographs showing clarifier in overflowed condition and weir of the clarifier in submerged condition.

4. The condition of the other components of ETP was pathetic. In spite of issuance of the closure directions to the industry, it has not made any effort to make any improvement in the treatment system, which shows that the industry is not serious towards the control of pollution. Photographs showing the components of ETP in pathetic condition and wet sludge lying near the components of ETPs are mentioned at **Plate-3** and **Plate-4** given below.

As



Plate-3: Photograph showing the components of ETP in pathetic condition

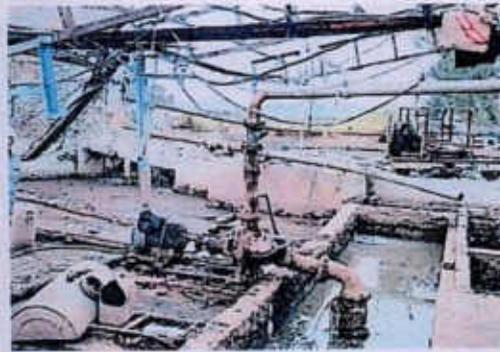


Plate-4: Photograph showing the wet sludge lying near components of ETP

5. Furthermore, rice husk ash was found dumped in non scientific manner inside its premises near ETP.
6. From the condition of the industry, no evidence is there, which may indicate that the power connection of the industry has been disconnected by PSPCL or not.

1.1.3 Recommendations:

- i) PPCB shall verify from the office of PSPCL whether the power connection of the industry has been disconnected or not. It shall also verify the record of the industry w.r.t. receipt of raw material/chemicals, dispatch of its products during the period of its closure i.e. 18.06.2019 till date.
- ii) In case the power connection of the industry is not disconnected by PSPCL, Chairman, PPCB shall get explanation of the PSPCL and take further action as per law.
- iii) Chairman, PPCB shall also issue following directions under the provisions of the Water Act, 1974 to the industry:

"The industry shall upgrade its ETP including the recycling of the treated wastewater, treatment of the purge water to meet with the prescribed standards, disposal of treated purge water onto land for plantation within premises and drying of sludge generated by the industry and disposal of dried sludge in an environmentally sound manner by 30.11.2019".

- iv) The industry shall not be allowed to discharge its treated/untreated effluent into Budha Nallah or any other drain.
- v) The industry shall dispose of rice husk ash in an environmentally sound manner.

2.0 Shree Ganesh Agroils, Village Gaunspur, Ludhiana

2.1 Background

As per the record of PPCB, the industry is engaged in the manufacturing of kraft paper @12 MTD using waste paper as raw material. The industry was granted consent to operate under Water Act, 1974, which is valid upto 30.06.2022. Earlier, in response to a complaint received from the residents of the village, the industry was visited by the

Regional Office, PPCB on 05.04.2019 and found that the effluent is being recycled and the excess effluent in the form of purge water was being discharged onto land for plantation. Further, heap of slurry of waste paper/ plastic, being generated from the process, was found at site.

Thereafter, the industry was issued show cause notice for revocation of consent to operate under Water Act, 1974 along with an opportunity of personal hearing before SEE, ZO-2, Ludhiana on 11.06.2019. After hearing, the industry was directed to dispose off slurry waste paper/ plastic in environmentally sound manner, clean sludge drying beds, re-circulate the treated trade effluent and submit the Bank Guarantee amounting Rs. 50,000/-.

2.2 Visit to the industry

Monitoring Committee visited the industry on 11.09.2019 and it was observed that the industry has provided a recirculation-cum-treatment system comprising of collection tank, sedicell & clarifier and the same were not in operation.

2.2.1 Collection of effluent sample

During the visit, the Monitoring Committee collected the effluent samples from various points and the same were sent to Punjab Pollution Control Board laboratory for analysis. The analysis results of the parameter are as per **Table-1** given below:

Table-1: Analysis results of the effluent samples.

Parameters	Inlet of ETP (Collection Tank)	Outlet of Primary Clarifier	Recirculation Tank	From Recirculation line used in main paper machine	AOX in soil sample:184 mg/kg
pH	5.9	5.9	6.0	6.0	
TSS mg/l	2750	935	710	510	
COD mg/l	5982	5680	4560	4080	
BOD mg/l	2025	1800	1275	1125	

The analysis results of the effluent sample of the industry are annexed as per **Annexure-1**

2.3 Discussion on the analysis results

The analysis results indicate that the values of the parameters TSS, COD and BOD at the inlet of ETP (collection tank) were observed as 2750 mg/l, 5982 mg/l and 2025 mg/l, respectively. The values of these parameters at the outlet of primary clarifier were found as 935 mg/l, 5680 mg/l and 1800 mg/l, respectively, in terms of TSS, COD and BOD. The treatment efficiency in terms of removal of TSS, BOD and COD was observed to be 66%, 5% and 11%, respectively, which are low in terms of BOD and COD parameter.

Further, the values of parameters in the effluent of recirculation tank were found as TSS : 710 mg/l, COD : 4560 mg/l and BOD : 1275 mg/l and the values of these parameters in the recirculation line used in main paper machine were found as 510 mg/l, 4080 mg/l and 1125 mg/l, respectively, for the parameters TSS, BOD and COD.

The value of Absorbable Organic Halide (AOX) in soil sample was observed to 184 mg/kg

2.4 Observations

1. The industry was in operation. It has provided a recirculation-cum-treatment system comprising of collection tank, sedicell and clarifier and the same were not in operation. The components showing collection tank, sedicell and recirculation system are mentioned at **Plate-5 and Plate-6.**

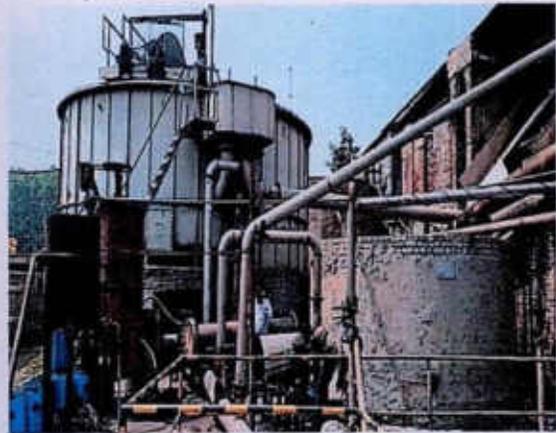


Plate-5: Photograph showing the collection tank

Plate-6: Photograph showing the sedicell and recirculation system

2. The industry was not operating any outlet for the discharge of effluent at the time of visit. Though the industry has claimed that it is recycling whole the wastewater into the processes of the industry but the physical conditions of the adjoining plot indicate that in the past, the industry might be discharging its wastewater / purge water in that area. Photographs showing the condition to soil of the area within the premises of the industry and in the adjoining plot are mentioned at **Plate-7 and Plate-8.**



Plate-7: Photograph showing condition of the soil within the premises of the industry



Plate-8: Photograph showing the condition of the soil in the adjoining plot

3. Soil sample was also collected and got analyzed from PPCB laboratory and its analysis results indicated that the value of AOX was observed to 184 mg/kg.
4. The housekeeping of the industry was very bad.
5. Boiler ash was not being disposed off in an environmentally sound manner.

2.5 Recommendations

The Monitoring Committee recommends that Chairman, PPCB shall depute an Environment Protection squad to make surprise visit of the industry and said squad shall carry out comprehensive inspection of the industry, prepare its water balance statement, assess the quantity of wastewater recycled into the processes of the industry, quantity of purge water discharged & its disposal, quantity of sludge generation & its drying mechanism and adequacy of the land available for disposal of treated purge wastewater conforming to the prescribed standards.

3.0 Satkar Paper Mills Pvt. Ltd, Village Gaunspur, Humbran, Ludhiana

3.1 Background

As per the record of PPCB, the industry is engaged in the manufacturing of kraft paper @ 50 TPD using waste paper as raw material and starch, alum and rosin as chemicals. The industry was granted consent to operate under Water Act, 1974, which is valid upto 30.06.2023. Earlier, in response to a complaint received from the residents of the village Gaunspura, the industry was visited by the Regional Office, PPCB on 05.04.2019 and found violating the provisions of Air Act, 1981 as the wet scrubber was not in operation and the black smoke was found emitted. Accordingly, the industry was issued show cause notice for revocation of consent to operate under Air Act, 1981 along with an opportunity of personal hearing before Senior Environmental Engineer, Zonal Office-2, Ludhiana on 12.06.2019. After hearing, the industry was directed to submit the Bank Guarantee amounting Rs. 1,00,000/- as an assurance not to emit the black smoke.

3.2 Visit to the industry

Re The Monitoring Committee visited by the industry on 11.09.2019 and the following observations were made:

3.3 Observations

1. The industry was not in operation. The industry has provided re-circulation cum treatment system comprising of collection tank, hill screens, equalization tank, DAF (Sedicell), spray filter and tank for re-circulation of effluent.
2. The physical conditions indicated that the industry has closed its processes just one day before the visit of the committee as the boiler and its pipelines were hot and boiler blow down was under process.

3. The boiler ash was not being disposed off in an environmentally sound manner. The housekeeping of the industry was very poor. The ash slurry was found spread all over the approach road leading to the industry.

3.4 Collection of effluent sample

Sh. Gagandeep Singh, representative of the industry informed that the industry was operated till last night and has not been operated today. During visit, the Monitoring Committee collected the effluent samples from the following points:

- i) Collection tank
- ii) From the stagnation area in the adjoining land to ETP.
- iii) The Soil sample from the area where the stagnation was found.

These effluent / soil samples were sent to PPCB lab for analysis. The analysis results of the effluent samples are mentioned as per **Table-3** given below:

Table-3: Analysis results of the effluent samples.

Parameters	Collection Tank of ETP	From the shallow area in adjoining land to ETP	AOX value in soil sample: 778 mg/kg
pH	5.94	6.6	
TSS, mg/l	3250	12680	
TDS, mg/l	14687	15009 <i>P2</i>	
COD, mg/l	12320	23960	
BOD, mg/l	4530	9325	

The analysis report of the effluent samples of the industry is annexed as per **Annexure-2**.

3.3 Discussion of the analysis results.

P2 The analysis results of the effluent sample collected from the collection tank of effluent treatment plant (ETP) indicate that the values of TSS, TDS, COD and BOD were observed as 3250 mg/l, 14687 mg/l, 12320 mg/l and 4530 mg/l, respectively. The values of these parameters (TSS, TDS, COD and BOD) in the effluent/ slurry sample collected from shallow area in the adjoining land to ETP were observed to be 12680 mg/l, ~~15009~~ *P2* 15009 mg/l, 23960 mg/l and 9325 mg/l, respectively. These values indicate that the industry might have discharged its settled sludge from the collection tank or recirculation system / tank in the adjoining land. Thus, the industry has conducted gross violations by discharging such contaminated effluent in slurry form in the adjoining land and polluting the environment.

The value of AOX in the soil sample was observed to be 778 mg/kg.

3.4 Recommendations

1. Chairman, Punjab Pollution Control Board shall initiate action to revoke consent to operate under the provisions of the Water Act, 1974 and Air Act, 1981, in case these have been granted to the industry.

2. Chairman, Punjab Pollution Control Board shall initiate action to issue directions for closure of the industry as per the provisions of the Water Act, 1974.
3. Chairman, Punjab Pollution Control Board shall impose an environmental compensation amounting to Rs. 25 lakh on the industry for violating the provisions of the Water Act, 1974 and disposing of the effluent in slurry form containing high concentration of TSS, TDS, COD & BOD on the adjoining land and damaging the environment. The said Environmental compensation amount shall be utilized for rejuvenation of quality of environment.
4. The industry shall upgrade its effluent treatment plant and recycling system within 3 months and ensure that the purge water generated from recycling system should be treated adequately so that it may conform to the standards prescribed by the Board. The treated purge water, conforming to the prescribed standards, may be utilized for plantation purposes. The sludge generated from the recycling system/collection tank/clarifier should be dried up through suitable drying mechanism and shall be disposed off in an environmentally sound manner. No treated/untreated wastewater and solid waste shall be allowed to discharge into any drain/Nallah/River. Water meters may be installed at the withdrawal point of water source, recycling system, purge water outlet and collection tank and prepare water balance statement on quarterly basis and submit the same to PPCB for verification.

4.0 Punjab Paper Mills Ltd., Vill. Gaunspur, Ludhiana

4.1 Background

As per the record of PPCB, the industry is engaged in the manufacturing of kraft paper @ 30 TPD by using waste paper as raw material. The industry was granted consent under the provisions of Water Act, 1974 on 31.12.2014, which has been expired on 30.06.2019. The site of the industry was visited by the officers of the Board on 17.06.2019 and found that the industry was discharging its effluent onto land for plantation. The slurry was found dumped in near-by agriculture fields. The case of the industry has been recommended for revocation of consent, but in the mean time consent was automatically expired on 30.06.2019. The industry has not applied for consent to operate, so far.

4.2 Visit to the industry by the monitoring committee

The industry has been visited by the Monitoring Committee on 11.09.2019. During visit, it was observed that for treatment and re-circulation of the wastewater, it has provided collection cum equalization tank, primary clarifier, aeration tank, collection tank so called secondary clarifier (without any sludge recirculation mechanism).

In order to assess the adequacy of the effluent treatment plant, effluent samples from the following points were collected:

- i) Equalization tank:
- ii) Primary clarifier
- iii) Aeration tank for MLSS and MLVSS
- iv) Treated wastewater storage tank
- v) Stagnation in the plantation area

These effluent sample have been analysed by PPCB Laboratory, the analysis results of which are mentioned in Table 4 given below:

Table – 4 : Analysis results of the effluent samples

Sr. No.	Parameters	Equalization tank	Primary Clarifier (Krafta Outlet)	Aeration Tank	Final treated wastewater storage tank	From stagnation in plantation area
1.	pH	6.2	6.1	-	7.2	6.9
2.	TSS, mg/l	970	964	-	292	135083
3.	COD, mg/l	3140	3722	-	1325	93275
4.	BOD, mg/l	1080	1340	-	346	20225
5.	MLSS, mg/l	-	-	1107	-	-
6.	MLVSS, mg/l	-	-	729	-	-
7.	AOX, mg/l	0.41	0.55	-	0.50	0.39

The analysis results of the effluent samples of the industry annexed as per **Annexure-3**.

4.2.1 Discussion on the analysis results

The analysis results indicate that the values of TSS, COD, BOD in the effluent lying in equalization tank were observed as 970 mg/l, 3140 mg/l and 1080 mg/l, respectively, whereas, the values of the parameters at the outlet of the primary clarifier were observed as 964 mg/l, 3722 mg/l & 1340 mg/l, respectively. However, the values of these parameters at the outlet of the primary clarifier have been found in the increasing order (COD : 3722 mg/l and BOD : 1340 mg/l against the value COD : 3140 mg/l and BOD: 1080 mg/l in the equalization tank). These facts indicate that the primary clarifier of the industry was not working properly and it was functioning just as holding or collection tank.

The values of MLSS and MLVSS in the aeration tank were found as 1107 mg/l and 729 mg/l, which are very low as compared to the expected value of MLSS:3000-4000 mg/l and MLVSS: 2500-3000 mg/l. In the final treated wastewater storage tank, the values of the parameters were found as BOD: 346 mg/l, COD: 1325 mg/l and TSS:292 mg/l. These values indicate that the effluent lying in the final treated storage tank was in diluted form because the concentration of biomass in terms of MLSS and MLVSS in the

aeration tank was very poor and is incapable to degrade the organic matter in terms of BOD and COD to the level, which has been shown in the final treated wastewater storage tank (BOD: 346 mg/l against its value as 1340 mg/l at the outlet of the primary clarifier and COD: 1325 mg/l against the value of COD as 3722 mg/l at the outlet of the primary clarifier).

Moreover, the industry has claimed that it is re-cycling whole of the wastewater, whereas, stagnation of the effluent in the plantation area was observed and its effluent sample was collected and analysed for the parameters namely pH, BOD, COD and TSS. The analysis results indicate that the values of TSS, COD and BOD were observed as 135083 mg/l, 93275 mg/l and 20225 mg/l, respectively. The values of these parameters in the effluent (in the form of slurry) lying stagnated in the plantation area, are much higher than the permissible values of 100 mg/l, 250 mg/l and 30 mg/l, respectively, for TSS, COD and BOD parameters and has thus damaged the environment.

The value of AOX in these effluent samples was found to varied between 0.39 to 0.55 mg/l, which was observed as 0.0034 kg/l of product.

4.3 Observations

- At the time of visit, the industry was not in operation. However, the working condition of the industry indicated that the industry had closed its processes just before the arrival of the Monitoring Committee within the premises of the industry.
- The industry has provided an aeration tank, but no re-circulation arrangements for re-circulation of the sludge from the secondary clarifier has been made. As such, the required values of MLVSS and MLSS cannot be maintained in the aeration tank.
- The tank so called secondary clarifier is not basically secondary clarifier, but it is just like a collection or holding tank and no mechanism has been provided to make it as secondary clarifier.
- In the final treated effluent collection tank, an outlet has been maintained to discharge its effluent. But at the time of visit, no effluent from this outlet was found discharged.
- In the plantation area, effluent (in the form of slurry) was found discharged, which was in the form of stagnation. Photographs showing the effluent in the form of slurry lying in the plantation area are mentioned as per **Plate-9 and Plate-10** given below.



Plate-9



Plate-10

Plate-9 and Plate-10: Photographs showing the effluent in the form of slurry lying in the plantation area.

The values of the parameters in this effluent in the form of slurry were found much higher than the permissible limits (TSS : 135083 mg/l against permissible values of 100 mg/l, COD : 93275 mg/l against permissible value of 250 mg/l and BOD : 20225 mg/l against permissible value of 30 mg/l).

- The industry has stored rice husk ash in its premises in an unscientific manner in an open area.

4.4 Recommendations

In view of the analysis results and observations of the Monitoring Committee during its visit to the industry on 11.09.2019, the following recommendations are made:

1. Chairman, PPCB shall initiate action to revoke consent to operate under the provisions of the Water Act, 1974 and Air Act, 1981, in case, these have been granted to the industry.
2. Chairman, PPCB shall initiate action to issue directions for closure of the industry under the provisions of the Water Act, 1974.
3. Chairman, PPCB shall impose an environmental compensation amounting to Rs. 25 lakh on the industry for violating the provision of the Water Act, 1974 for disposing of its effluent in slurry form containing very high values of TSS, COD and BOD in the plantation area and thus damaging the environment.
4. The industry shall upgrade its effluent treatment plant and recycling system within 3 months and ensure that the purge water generated from recycling system should be treated adequately so that it may conform to the standards prescribed by the Board. The treated purge water, conforming to the prescribed standards, may be utilized for plantation purposes. The sludge generated from the recycling system/collection tank/clarifier should be dried up through suitable drying mechanism and shall be disposed off in an environmentally sound manner. No treated/untreated wastewater and solid waste shall be allowed to discharge into

any drain/Nallah/River. Water meters may be installed at the withdrawal point of water source, recycling system, purge water outlet and collection tank and prepare water balance statement on quarterly basis and submit the same to PPCB for verification.

5.0 Hemkunt Coated Paper Pvt. Ltd., Village Humbran, Ludhiana

5.1 Background

PPCB's record indicated that the industry is engaged in the manufacturing of kraft paper @15 TPD using waste paper as raw material. The industry was granted consent to operate under the provision of Water Act, 1974, which is valid upto 30.06.2018. Thereafter, the industry applied for renewal of consent, which could not be decided as the industry has operated temporarily for some time. Earlier, in response to a complaint received from the residents of the village Gaunspura, the industry was visited by the Regional Office, PPCB on 17.05.2019 and found that the industry was in operation and the clarifier was found under maintenance. The effluent samples collected from the purge water, being discharged onto land for plantation, failed to qualify the prescribed standards w.r.t. the parameters namely BOD (113mg/l), O&G(10.9), TSS (148 mg/l) and TDS (2110 mg/l).

Further, the officers of PPCB also found that the industry was required to provide adequate air pollution control measures for using pet coke as fuel. Accordingly, the industry was issued notice u/s 31-A of Air Act, 1981 with show cause notice for refusal of consent to operate under Air Act, 1981 along with an opportunity of personal hearing before Chief Environmental Engineer, Ludhiana on 01.07.2019. After hearing, the industry was directed to install the SO₂ meter & ventury scrubber as Air Pollution Control Device (APCD) and to submit the Bank Guarantee amounting Rs. 1,00,000/- as an assurance to comply with the pollution control laws.

5.2 Visit to the industry by the monitoring committee

During the visit to the industry by the Monitoring Committee on 11.09.2019, it was observed that the industry was not in operation. The representative of the industry informed that the industry is not in operation from last one and half month. The condition of the industry also revealed that same is not being operated for the last few months.

5.3 Recommendations

P4 Since, the industry is lying closed for the last few months, as such, the industry has to obtain consent to operate of the Board under the provisions of Water Act, 1974 and Air Act, 1981 before starting its operation. Photographs showing the non operation status of industry for the last few months are mentioned at **Plate-11 and Plate-12** given below.



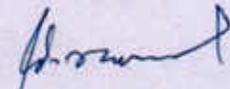
Plate-11



Plate-12

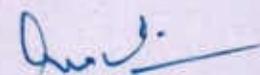
Plate-11 and Plate-12: Photographs showing the non operation status of industry for the last few months.

Therefore, the Monitoring Committee recommends that Chairman, Punjab Pollution Control Board shall initiate action to issue necessary directions under the provisions of the Water Act, 1974 and Air Act, 1981 to the industry not to operate its industrial unit without making the effluent treatment plant and air pollution control device in operational conditions and getting consent to operate under the provisions of Water Act, 1974 and Air Act, 1981, failing which the Board shall take legal action against the industry under the provisions of the Water Act, 1974 and Air Act, 1981.


S.C. Agrawal


Dr. Babu Ram


Sant Balbir Singh
Seechewal


Justice Pritam Pal,
Former Judge,
Punjab & Haryana High Court,
(Chairman of Monitoring Committee)

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

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 12th day of September, 2019 from Sh. Gursharan Singh, FA, sample of M/s Shree Ganesh Agroils, Village Gaunspur, 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 12.09.2019 to 18.09.2019 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 (Collection Tank)	Outlet of Primary Clarifier	Recirculation tank	From Recirculation line used in main paper machine
pH	5.9	5.9	6.0	6.0
Total Suspended Solids mg/l	2750	935	710	510
Chemical Oxygen Demand mg/l	5982	5680	4560	4080
Bio-chemical Oxygen Demand mg/l	2025	1800	1275	1125

- Note 1) All the results are in mg/l except pH
2) Samples for AOX parameters sent to SAI lab for analysis.
3) 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 19 day of September, 2019

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

no 28827
19/9/2019

O/c Meenu/19/9/19
(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-I, Ludhiana

Authorisation Letter No -

Dated -

Endst No. 28828-29

dt 19/9/2019

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

O/c Meenu/19/9/19
(Signature)
State Board Analyst

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X
REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 51-51
Dated 20.9.2019

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 12th day of September, 2019 from Sh. Gursharan Singh, F.A, samples of M/s Satkar Paper Mills, Pvt. Ltd. Vill. Humbran, Ludhiana for analysis. The samples were in a condition fit for analysis reported below:-

I further certify that, I have analysed the above mentioned samples from 12.09.2019 to 19.09.2019 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 of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as under

Point of sample collection: - As per data Sheet

Parameters	Collection Tank of ETP	From the Shallow area near the adjoining land to ETP
pH	5.94	6.6
Total Suspended Solids mg/l	3250	12680
Total Dissolved Solids mg/l	14687	15009
Chemical Oxygen Demand mg/l	12320	23960
Bio-chemical Oxygen Demand mg/l	4530	9325

- Note: 1) All the results are in mg/l except pH
2) Samples for AOX parameter sent to SAI lab for analysis and results are still awaited
3) Entire sample consumed in Testing.

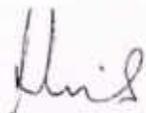
The condition of the seals, fastenings and containers on receipt was as follows:-

Seals & fastenings of the container were found intact
Signed this 20th day of September, 2019

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

NO 28975
20/9/2019


(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-III, Ludhiana

Authorisation Letter No -

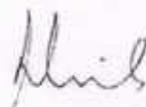
Endst No 28976-77

Dated -

dt 20/9/2019

A copy of the above is forwarded to the:

- The Chairman Office of Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali
- Sr. Environmental Engineer, Punjab Pollution Control Board, Zonal Office-II, Ludhiana


(Signature)
State Board Analyst

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 42-46
Dated 19.9.2019

I hereby certify that I Kiran Jasuja, 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 12th day of September, 2019 from Sh. Gursharan Singh, FA, samples of M/s Punjab Paper Mills Ltd., Vill. Gaunspur, 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 12.09.2019 to 19.09.2019 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 India Standard Methods of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as follows

Point of sample collection: - As per data Sheet

Parameters	(42) Equalization tank	(43) Primary Clarifier (Craft Outlet)	(44) Aeration Tank	(45) Final treated waste water storage tank	(46) From stagnation in plantation Area
pH	6.2	6.1	-	7.2	6.9
Total Suspended Solids mg/l	970	964	-	292	-
Chemical Oxygen Demand mg/l	3140	3722	-	1325	-
Bio-chemical Oxygen Demand mg/l	1080	1340	-	346	-
MLSS mg/l	-	-	1107	-	-
MLVSS mg/l	-	-	729	-	-

- Note 1) All the results are in mg/l except pH.
2) Samples for AOX parameters sent to SAI lab for analysis.
3) 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 19th day of September, 2019

Address -

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

no 28871
19/9/2019

K. Jasuja
(Signature) 19/9/19
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-I, Ludhiana

Authorisation Letter No. -

Dated -

Endst No 28872-73

dt 19/9/2019

A copy of the above is forwarded to the:

- The Chairman Office of Executive committee, 5th tower, 4th floor, Forest Complex, Sector 68, Mohali.
- Sr. Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Ludhiana

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA
FORM-X

Ten

Report No. 46
Dated 30.9.2019

REPORT BY THE STATE BOARD ANALYST (See Rule 24)

I hereby certify that I Kiran Jasuja, 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 12th day of September, 2019 from Sh. Gursharan Singh, FA, sample of M/s Punjab Paper Mills Ltd., Vill. Gauraspur, Ludhiana for analysis. The sample was in a condition fit for analysis reported below.

I further certify that I have analysed the aforementioned sample from 24.09.2019 to 30.09.2019 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 India Standard Methods of sampling and test (Physical & Chemical) for water and waste water. The details of the analysis results are as follows.

Point of sample collection: - As per data Sheet

Parameters	(46) From stagnation in plantation Area
Total Suspended Solids mg/l	1,35,083
Chemical Oxygen Demand mg/l	93,275
Bio-chemical Oxygen Demand mg/l	20,225

- Note: 1) All the results are in mg/l except pH
2) Sample for AOX parameters sent to SAI lab for analysis
3) Entire sample was consumed in Testing

Special Note:

Sample no 46 was analyzed for pH as per the original data sheet. In this regard vide e mail dated 24.9.2019 received from the Member (Dr. Babu Ram), Monitoring Committee, (NGT) Sector 68, Mohali, it was requested that sample (no 5 of original data sheet) i.e. effluent sample from plantation area in the form of stagnation of the said industry may also be analyzed for TSS, BOD & COD from that day (24.9.2019) onwards. Therefore, the sample which was kept preserved has been analyzed for TSS, BOD & COD and the results are reported above.

Signed this 30th day of September, 2019
Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

Kiran Jasuja
(Signature) 30/9/19
State Board Analyst

To
The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-I, Ludhiana
Authorisation Letter No - 30165

Enclst No 30166-67

Dated - 30/9/19
at 30/9/19

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

Kiran Jasuja
(Signature) 30/9/19
State Board Analyst

Review meeting held under the chairmanship of Justice Jasbir Singh, former Judge, Punjab & Haryana High Court now as Chairman of the Monitoring committee constituted by Hon'ble N.G.T in OA No 916 of 2018 in the matter of Sobha Singh and other vs State of Punjab and others on 8.10.2019 at 2.30 PM at Marketing Committee Office, Sultanpur Lodhi, District Kapurthala

List of the Participants is as per Annexure-1

At the outset, the Chairman of the monitoring committee apprised that a news item has been published in 'The Tribune' dated 7.10.2019 captioned as "*To rid Kali Bein of pollutants, govt. to increase water flow*". It has been mentioned in the news item that only one month time has been left for the celebration of 550th Birth Anniversary of Sri Guru Nanak Dev Ji at Sultanpur Lodhi but still effluents of STP, Kapurthala containing high values of F.Coli and T.Coli and *Bhalano Di colony* effluent are polluting Holy Bein. As one of the option to dilute the water flowing into Kali Bein, flow of water into Kali Bein shall be increased from 250 cusec to 400 cusec. As per news item, there is also proposal to remove water hyacinth from the Bein. Therefore, Chairman of the monitoring committee desired that there is need to treat the sewage of Kapurthala town and other polluting sources falling into Kali Bein (Holy Bein) adequately so that quality of water flowing in the Bein may be improved.

Senior Environmental Engineer, Punjab Pollution Control Board Jalandhar apprised that in order to control pollution sources into Holy Bein, two meetings have already been held under the chairmanship of Justice Pritam Pal, former Judge, Punjab & Haryana High Court, earlier chairman of this monitoring committee on 8-5-2019 and 1-8-2019. In these both meetings, the concerned officers of the stake holder departments were directed to complete all the activities relating to control of pollution into Holy Bein well in time so that these sources of pollution maybe curtailed.

Thereafter the following issues were reviewed.

1. Operation of STP Sultanpur Lodhi

The Executive Officer, Municipal Council, Sultanpur Lodhi informed that 3 lifting pumps have been started and are in operation. STP, Sultanpur Lodhi has been made operation and the treated sewage of STP is meeting with the standard except the parameter F.Coli. In order to control F.Coli parameter, the necessary arrangements for effective chlorination shall be made and the said parameter shall also be brought within permissible limit of 1000 MPN/100 ml by 31.10.2019.

With Regard to tapping of discharge of sewage into Sultanpur drain, it was informed that the necessary repairing has been made and now there is no discharge into said drain leading to Holy Bein. Further, the treated sewage is utilized for irrigation and only during no demand period, the treated sewage is discharged into

Jalal Dov drain but the sewage is dried up on the way and it is not reaching to Holy Bein.

Chairman of the monitoring committee directed the Executive Officer, Municipal Council Sultanpur Lodhi as under: -

- Necessary arrangements be made for effective disinfection of treated sewage to control F.Coli parameter within the prescribed norms by 31.10.2019.
- MC, Sultanpur Lodhi shall ensure that no untreated/treated sewage is discharged into Holy Bein in any circumstance.

2. Operation of STP Kapurthala

Since the Executive Officer Municipal Council, Kapurthala did not attend the meeting, therefore, the representative of MC, Kapurthala informed that in order to repair the UASB reactor and other components of STP, Kapurthala, estimate costing Rs 1.75 crore has been prepared and the said amount shall be deposited with PWSSB by 15.10.2019. The tenders already invited by PWSSB, shall be opened by 10.10.2019, the work shall be allotted by 15.10.2019 and repairing of all the components of STP shall be completed by 31.01.2020.

With regard to utilization of treated sewage of STP for irrigation, committee was informed that funds have not been utilized to lay the remaining irrigation network and to provide adequate arrangements to maintain gravity flow of treated sewage into agriculture fields.

Regarding bypass arrangements into Holy Bein, which was made during rainy season, the same shall be closed by 20.10.2019.

The Chairman of the monitoring committee directed as under:

- Municipal council Kapurthala shall release funds amounting to Rs 1.75 crore to PWSSB by 15.10.2019 for repairing the various components of STP.
- PWSSB shall open tender by 10.10.2019.
- Work shall be allotted by PWSSB by 15.10.2019.
- The repairing of various components of STP including UASB reactor shall be completed by 31.01.2020.
- The Municipal Council shall ensure that the treated sewage is utilized for irrigation purposes immediately after the harvesting of paddy crop and will not discharge any sewage (treated/untreated) into Holy Bein.
- PPCB shall monitor the progress with regard to repairing of various components of STP and other works fortnightly and submit the report to the monitoring committee.

BHL

3. **Plugging of outlet of Wadala Drain carrying part of untreated domestic effluent of Kapurthala Town into Holy Bein.**

MC Kapurthala informed that 3 outlets out of total 6 outlets, falling into Wadala Drain further leading to Holy Bein, have been plugged, the remaining 3 outlets shall be plugged by MC Kapurthala by 20.10.2019.

The Chairman of the monitoring committee directed that the remaining 3 outlets shall be plugged by MC, Kapurthala by 20.10.2019.

4. **Plugging of discharge of sewage of village Kheda Dona into Holy Bein.**

PPCB informed that DC, Kapurthala has visited the site few days back and it was observed that PSPCL has released electric power connection at disposal system based on agriculture use. As such, 8 hourly electric supplies is given to lift the sewage from collection tank to the pond, constructed across the Holy Bein. However, 24 hour electric supply is required for proper lifting of sewage of village so as to ensure no sewage discharge into Holy Bein. DC, Kapurthala issued instructions on the spot to XEN, PSPCL to release regular power connection to the Department of Rural Development and Panchayat within 7 days and the said department was asked to give an application to PSPCL immediately.

Chairman of the monitoring committee directed that the Department of Rural Development & Panchayat to make application to PSPCL within 7 working days to release regular electric connection based on 24 hours regular electric supply at the disposal system of village Kheda Dona.

5. **Installation of STP of Capacity 3 MLD for treatment of sewage of Rawal and its colonies, presently, being discharged into Bhulana Drain further leading to Holy Bein.**

The representative of PWSSB informed that out of Rs.2 crore already released to PWSSB, land has been purchased through PUDA. The total cost of STP is about Rs 6.00 crore and no arrangements have been made for release of remaining funds, as such, no activity like tendering process has been started so far. Chairman of the monitoring committee took a serious view in this regard and he directed that DC Kapurthala shall immediately make arrangements to provide necessary funds for setting up of STP.

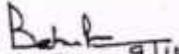
Further, the Chairman of the committee directed as under:

- PWSSB shall start tendering process by 15-10-2019.
- DC Kapurthala shall hold meeting with all the stake holder departments and get release the remaining funds to PWSSB. The said meeting maybe conducted before 15.10.2019.

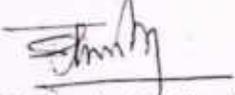
6. **Release of 350 cusec of water from Mukerian Hydrel Project into Holy Bein.**
Chairman of the monitoring committee directed that the Department of Water Resources, Government of Punjab shall ensure the release of 350 cusec of water from Mukerian Hydrel Project into Holy Bein to maintain aquatic life in the Bein.
7. **Removal of water Hyacinth from Holy Bein for its free flow.**

The Chairman of the monitoring committee directed that water Hyacinth from Holy Bein may be removed by the Department Water Resource, Government of Punjab within 15 days.

Lastly, the Chairman of the monitoring committee directed that all the Departments shall submit action taken report on the direction given in the earlier meeting dated 1.8.2019 within 3 days i.e by 12-10-2019 through Email at email address sutlejbeasriver@gmail.com DC, Kapurthala shall hold a meeting with the stake holder departments before 15.10.2019 and action taken report be submitted to the monitoring committee by 18.10.2019.


(Dr. Babu Ram) 9/10/2019
Member, Monitoring
Committee

Minutes approved.


(Justice Jasbir Singh)
Chairman, Monitoring Committee

List of Participants

A) Members of the Monitoring Committee

Sr. No.	Name and designation of the officer	Designation in the Monitoring Committee
1.	Justice Jasbir Singh, former Judge, Punjab and Haryana High court	Chairman
2.	Dr. Babu Ram, former Member secretary, PPCB	Member

B) Officers of the State Government

Sr. No.	Name and designation of the officer
1.	Sh. Harbir Singh, Senior Environmental Engineer, Punjab Pollution Control Board, Jalandhar
2.	Ms. Seema Singh, Tehsildar, Sultanpur Lodhi.
3.	Sh. Bhisham, Assistant Environmental Engineer, Punjab Pollution Control Board, Jalandhar
4.	Sh. Baljit Singh, Executive Officer, Sultanpur Lodhi
5.	Sh. Tarlochan Singh, Junior Engineer, MC, Kapurthala
6.	Sh. Jasbir Singh, Junior Engineer, PWSSB, Kapurthala

ANNEXURE - 7

Minutes of 2nd Review meeting held under the Chairmanship of Justice Jasbir Singh, former judge Punjab & Haryana High Court Now as Chairman of the Monitoring Committee constituted by Hon'ble National Green Tribunal in OA no 916 of 2018 in the matter of Sobha Singh and other vs. State of Punjab and others on 17-10-2019 at 10.30 AM at meeting hall, District Administration Complex, Kapurthala.

List of the Participants is as per Annexure-1

The Chairman of the Monitoring Committee apprised that on the occasion of 550th Birth Anniversary of Guru Nanak Dev Ji, it also becomes imperative that the sewage of Sultanpur Lodhi and Kapurthala Towns and other polluting sources, falling into Kali Bein (Holy Bein), need to be treated adequately so as to improve the quality of water flowing into the Bein. During the last meeting held on 8-10-2019, the detailed discussion on the various pollution sources and control thereof was held and the concerned departments were directed to complete all the activities within the time schedule as mentioned in the minutes of the meeting held on 1.08.2019. Therefore, now the 2nd review meeting with the District Level Officers has been held to monitor the progress of these activities.

The following issues were reviewed

1. Operation of STP Sultanpur Lodhi

The representative of Municipal Council Sultanpur Lodhi informed that in order to lift the sewage to carry into STP, all the 3 lifting pumps have been replaced and are in operation. STP has been made operational and the treated sewage of STP is meeting with the prescribed standards except the parameter F.Coli. In order to control F.Coli parameter, the necessary arrangements for effective chlorination have been made.

He further informed that the discharge of sewage into Sultanpur Drain shall be stopped by 20.10.2019. Regarding utilization of treated sewage for irrigation, it was informed by him that the same is being utilized for irrigation and only during no demand period, the treated sewage is discharged into Jalal Dov Drain but the sewage is dried up on the way and it does not reach to Holy Bein.

But
Chairman of the monitoring committee directed as under:

- Municipal Council, Sultanpur Lodhi shall ensure that all the discharges of sewage into Sultanpur drain should be stopped by 20.10.2019
- No treated/untreated sewage shall be discharged into Holy Bein in any circumstance.

2. Operation of STP, Kapurthala

The representative of Municipal Council, Kapurthala informed that in order to repair the UASB reactor and other components of STP, an amount of Rs 50 Lac.

has been deposited with PWSSB out of total estimated cost of Rs 1.75 crore. 2nd installment of Rs 50 Lac shall be given to PWSSB by 05.11.2019.

Representative of PWSSB informed that tender for repairing of STP was invited on 10.10.2019 but no bid was received from any agency. Now, the department has again called the tender and the same shall be opened on 30.10.2019. In case any eligible bidder is available on 30.10.2019, work shall be allotted immediately.

Chairman of the Monitoring Committee directed as under:

- Municipal Council Kapurthala shall deposit the 2nd installment of Rs 50 Lac for repair of STP to PWSSB on 5.11.2019.
- The work shall be allotted for repairing of STP by 30.10.2019.
- The repairing of various components of STP including UASB reactor shall be completed by 31-01-2020.
- The Municipal Council shall ensure that the treated sewage is utilized for irrigation purposes immediately after the harvesting of paddy crop and shall not discharge any sewage (treated/untreated) into Holy Bein.
- PPCB shall monitor the progress with regard to repairing of various components of STP and other works fortnightly and submit the report to the Monitoring Committee.

3. Plugging of outlet of Wadala Drain, carrying untreated domestic sewage of Kapurthala Town into Holy Bein.

MC Kapurthala informed that all the 6 outlets falling into Wadala Drain, further leading to Holy Bein, have been plugged.

The Chairman of the Monitoring Committee directed that PPCB shall verify the status of closing of these 6 outlets within 7 days and submit the report to the Monitoring Committee.

4. Plugging of discharge of sewage of village Kheda Dona into Holy Bein.

Bein
It was apprised that PSPCL has released electric power connection based on agriculture use for 8 hours in a day. However, in order to lift the sewage regularly and to ensure no sewage is discharged into Holy Bein, 24 hours electric supply is required for proper lifting of sewage. Sub Divisional Engineer of PSPCL informed that for agriculture usage, 8 hour electric supply is allowed. However, regarding release of electric supply for 24 hours, the same shall be regularized within 10 days after getting special permission from his higher authorities.

The Chairman of the monitoring committee directed as under:

- PSPCL shall regularize the electric connection for 24 hours within 10 days so that lifting pumps are operated regularly to lift the sewage into pond, provided across the Bein.
 - Village Panchayat Kheda Dona shall depute a person for regular operation of pumps.
 - The treated sewage of pond shall be utilized for irrigation purposes and village Panchayat shall ensure that no treated/untreated sewage is discharged into Holy Bein.
5. Installation of STP of capacity 3 MLD for treatment of sewage of Rawal and its colonies, presently, being discharged into Bhulana drain further leading to Holy Bein.

Chief Administrator (CA), Jalandhar Development Authority (JDA) informed that the land for installation of STP has been transferred in the name of JDA. However, for arrangement of funds amounting to Rs. 6 crore, JDA and department of rural development and Panchayat shall share the said amount proportionally based on the quantity of discharge from colonies and villages. CA, JDA claimed that the department in the process of issuing notices to the owners of illegal colonies.

The Monitoring Committee observed that the installation of STP to treat the sewage of Rawal and colonies, is a long term process and it will take time and there is urgent need to stop the discharge of sewage of these colonies into Holy Bein. Therefore, there is a need to make an alternative arrangement. The Monitoring Committee visited the disposal point, where the discharge of these colonies through Bholana drain is entering into Holy Bein. The matter was discussed in detail at site and made its view point that two or three pond system based on Seechewal model or Haryana model or other model may be adopted as short term measure. DDPO Kapurthala, who was present at site, informed that he shall demarcate the Panchayat land available near the Bein within 02 days.

After detailed discussion, the Chairman of the Monitoring Committee directed as under:

- DDPO, Kapurthala shall demarcate the available Panchayat land near Holy Bein within 02 days.
- The construction of pond system to treat the sewage coming through Bholana drain shall be started by JDA within 7 days.

- ✓ Chief Administrator, Jalandhar Development Authority was directed to take personal interest to ensure to complete the work in a time bound manner.
 - ✓ Baba Seechewal, an Environmentalist, has agreed to provide necessary help and facilities for digging of the pond system near the Holy Bein.
 - ✓ Deputy Commissioner, Kapurthala shall ensure the completion of the work in a time bound manner so that discharge of untreated sewage/sullage is stopped entering into Holy Bein within 10 days.
 - The treated sewage of pond system shall be utilized for irrigation purposes and no treated/untreated sewage shall be discharged into Holy Bein.
 - Necessary funds for installation of STP of capacity 3 MLD shall be arranged jointly by JDA and Department of Rural Development and Panchayat by 31.12.2019.
 - The funds so arranged by these two departments shall be transferred to PWSSB for installation of STP of 3 MLD by 10.01.2020 and thereafter work of STP may be started immediately.
6. Release of 350 cusec of water from Mukerian Hydrel Project into Holy Bein.

It was decided that the Department of Water Resources, shall ensure the release of 350 cusec of water from Mukerian Hydrel Project into Holy Bein to maintain aquatic life in the Bein.

7. Removal of water Hyacinth from Holy Bein for free flow.

The Chairman of the Monitoring Committee directed that water Hyacinth from Holy Bein may be removed by Department of Water Resource within 15 days.

Other Issues:

1. Management of solid and liquid waste to be generated during the celebration of 550th Birth Anniversary of Sri Guru Nanak Dev Ji at Sultanpur Lodhi.

The Monitoring Committee observed that a month has been left for celebration of 550th Birth Anniversary of Sri Guru Nanak Dev Ji. During the said event, it is expected that large quantity of solid and liquid waste shall be generated by the

pilgrims. Therefore, in order to keep clean the environment of Sultanpur Lodhi area and maintain the water quality of Holy Bein, there is dire need to manage these waste.

The representative of District Administration informed that in order to manage such wastes, concessionaire has prepared a project costing Rs. 5 Crore. He will take care of all these waste. For the collection and treatment of liquid waste, two STPs namely Makhu & Zira have been identified, which have adequate capacity to handle the estimated discharge of sewage from the temporary developed tent cities on this occasion.

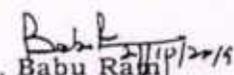
The Chairman of the Monitoring Committee directed as under

- The District Administration shall submit copy of Action Plan and project report prepared for management of solid and liquid waste to be generated during the celebration events of 550th Birth Anniversary of Sri Guru Nanak Dev Ji.
- The concessionaire shall comply with the provisions of Solid Waste Management Rules, 2016 and Water Act, 1974 in letter and spirit and shall not discharge any liquid waste into sewerage system of Sultanpur Lodhi or directly into Bein, failing which high amount of environment compensation shall be imposed upon the concessionaire along with legal action as per the provisions of Water Act, 1974 and Solid Waste Management Rules, 2016.

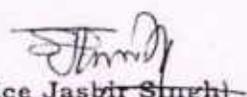
2. Higher rate of biodegradable carry bags

The representative of District Administration informed that biodegradable carry bags, a replacement of carry bags, are available in the market but their rates are quite high and thus, the shopkeepers have reservation to use these carry bags. It was requested that the matter may be looked into.

Chairman of the Monitoring Committee assured that the matter shall be brought into the notice of Principal Secretary, Department of Local Government, Punjab, by the Monitoring Committee to look into the issue.


(Dr. Babu Rani) 27/11/2015
Member,
Monitoring Committee

Minutes approved


(Justice Jasbir Singh)
Former Judge Punjab & Haryana High Court
now as Chairman of Monitoring Committee