4th report

of the

Executive Committee

Constituted by the

Hon'ble National Green Tribunal

in

OA No. 138 of 2016

&

OA No. 139 of 2016

in the matter of

Stench Grips Mansa's Sacred Ghaggar river with Yogender Kumar

Submitted by

Executive Committee constituted by Hon'ble NGT

8th January, 2020

Contents

4th report of Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 of 2016 & OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar

1.0 Constitution of the Executive Committee

The Hon'ble National Green Tribunal in order dated 7.8.2018 had constituted an Executive Committee for executing the orders of the Hon'ble NGT in OA No. 138 of 2016 & OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar and subsequently in the order dated 21.05.2019, the name of Dr. Babu Ram, former Member Secretary, Punjab Pollution Control Board was included as a Member of the Executive Committee. The Hon'ble Tribunal vide its order dated 1.10.2019 has included Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana as Member of the Executive Committee and now the structure of the Executive Committee is as under: -

Sr. No.	Name & Designation	Designation in the Executive Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Sh. J.C. Babu, Senior Scientist, CPCB,	Member
4.	Dr. V.K. Hatwal, Additional Director, Ministry of Environment Forest & Climate Change (MoEF & CC)	Member
5.	Dr. Babu Ram, Former Member Secretary, Punjab Pollution Control Board	Member now as Technical Expert as per order dated 22.11.2019 of the Hon'ble Tribunal

2.0 Submission of 3rd report by the Executive Committee on 1.10.2019 vide No. CEC/2019/445, dated 1.10.2019 and consideration of the report by Hon'ble NGT on 22.11.2019.

The Executive Committee had submitted its report dated 1.10.2019 under the cover dated 1.10.2019, which was considered by the Hon'ble Tribunal on the date of hearing held on 22.11.2019. After considering the report of the Executive Committee, the Hon'ble Tribunal has given clarification about future functioning of the Committee as per para no.21 of the said order, which is re-produced as under:

> *"21. We consider it necessary to clarify the procedure for functioning of the Committee henceforth. The Committees may consider all relevant issues and give its reports preferably once in two months to this Tribunal with a copy to all the concerned Chief Secretaries and SPCBs/PCC. The concerned Chief Secretaries/ SPCBs/PCC may look into the said report and give their response to this Tribunal within two weeks thereafter. The response may include the action taken by the statutory bodies or other authorities. Since*

the Committee constituted by this Tribunal is a Fact Finding/Executing/ Monitoring Committee and has to give status report to this Tribunal, its functioning may not be viewed as giving final directions to the regulatory bodies. However, the State regulatory body may take into account the observations of the Committee in their functioning and act their own after considering the response of the alleged polluter. The Committee will be at liberty to point out to this Tribunal that action taken by the regulatory authority was not adequate. These observations are consistent with the Orders of this Tribunal dated 21.10.2019 in O.A. No. 670 of 2018 with regard to the procedure and functioning of a similar Committee in the State of UP."

Further, the Hon'ble Tribunal in para no.23 has given directions as under

"23 Accordingly, following directions are issued:-

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

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

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

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

(v) Let steps be taken by concerned States/UTs in terms of the recommendations and for compliance of direction for connecting the 40 drains to the STPs wherever feasible and till then in-situ remediation in terms of para 20 above.

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

A copy of this order be sent to the Chairmen, Member Secretaries, Secretaries Urban Development and Secretaries Irrigation and Public Health of all the four States/ UT in question.

List for further consideration on 17.01.2020."

The detailed order dated 22.11.2019 of the Hon'ble Tribunal is annexed as per **(Annexure-1).**

3.0 Submission of 4th report of the Executive Committee constituted by Hon'ble National Green Tribunal.

In compliance to the direction given in para no. 21 of the order dated 22.11.2019 in OA No. 138 and 139 of 2016, of the Hon'ble Tribunal, the Executive Committee submits its 4th report as under:

In order to control pollution in river Ghaggar, Executive Committee held meetings with State Level Committees of State of Punjab, Haryana, Himachal Pradesh and U.T Chandigarh, District Level Special Task Force of various Districts of these States, visited the pollution sources including industries located in the catchment area of river Ghaggar & its tributaries, collected information about performance of existing STPs, Installation of new STPs, upgradation of existing STPs, water quality in river Ghaggar, groundwater quality of the groundwater sources located in the vicinity of river Ghaggar etc and the report is submitted as under:

3.1 Visit to the Industries

3.1.1 M/s Piccadily Sugar and Allied Industries Ltd; (Distiller Unit) Village Hamjheri, Tehsil Samana, District Patiala on 19.9.2019

The Executive Committee visited M/s Piccadily Sugar and Allied Industries Ltd; (Distillery Unit) Village Hamjheri, Tehsil Samana, District Patiala on 19.9.2019 and the recommendations made by the Executive Committee are mentioned as under:

Recommendations

The Executive Committee has made the following recommendations

1) Chairman Punjab Pollution Control Board shall follow due procedure and issue following directions to the industry under the provisions of Water Act, 1974:
   a) Revoke consent to operate under the provisions of Water Act, 1974.
   b) Directions for closure of the industry
   c) Direction to PSPCL for disconnection of electric connection of the industry.
   d) Impose environment compensation amounting to Rs 1 crore and the said amount may be utilized for rejuvenation of quality of environment.
   e) Upgrade effluent treatment plant to Zero Liquid Discharge Technology within 6 months and it shall not be allowed to discharge any trade effluent on to land/drain/Nallah/River etc.
   f) Submit performance guarantee amounting to Rs 50 lakh for successful installation and commissioning of Zero Liquid Discharge Technology.
2) Deputy Commissioner, Patiala shall constitute a committee of the following officers to dig out the well/areas, where the complainants have claimed that the sludge/highly contaminated effluent was dumped in the well/area.
   a) Sub divisional Magistrate, Patiala

b) Environmental Engineer, PPCB, Patiala
c) Representative of Legal Services Authority
d) Deputy Superintendent of Police
e) Sarpanches of two villages near to the industry

The report of the Committee may be sent to Chairman, PPCB within 21 days for further action as per the provision of Water Act, 1974 under intimation to the Executive Committee.

The report on visit to the said industry alongwith recommendations of the Executive Committee were sent to Chairman, Punjab Pollution Control Board vide No. CEC/2019/491, dated 14.10.2019**(Annexure-2).**

3.1.2 Visit to M/s Bhandari Export Industries Ltd., Village Sarsini, Tehsil Dera Bassi, Distt. Mohali and M/s T.C Terrytex Ltd. Village Sarsini, Tehsil Dera Bassi, Distt. Mohali on 1.10.2019

The Executive Committee visited M/s Bhandari Export Industries Ltd., Village Sarsini, Tehsil Dera Bassi, Distt. Mohali and M/s T.C Terrytex Ltd. Village Sarsini, Tehsil Dera Bassi, Distt. Mohali on 1.10.2019 and the recommendations made by the Executive Committee are as under:

3.1.2.1 M/s Bhandari Export Industries Ltd., Village Sarsini, Tehsil Dera Bassi, Distt. Mohali

Recommendations

1. Chairman, PPCB shall initiate the following action under the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

   a) Impose an environment compensation amounting to Rs. 25 lakh upon the industry and the said amount may be utilized for restoration of quality of environment.

   b) Issue directions to the industry that it shall operate its effluent treatment plant efficiently & effectively and the treated effluent conforming to the standards shall be discharged in well developed plantation area with proper distribution network in such a way that the treated wastewater is utilized properly. The treated effluent conforming to the standards may be allowed to be discharged into land for plantation provided the concentration of TDS is always below the permissible value of 2100 mg/l, otherwise, the industry shall install multi effect evaporator followed by dryer and the dried sludge may be sent to TSDF, Nimbua.

   c) The industry shall install OCEMS at the inlet to ETP by 31.01.2020 to monitor the parameters namely pH, BOD, COD, TSS & TDS so that the effluent with actual concentration of the parameters may enter into effluent treatment plant.

With regard to environment compensation to be imposed on the polluter, the Hon'ble NGT in para no. 16 of its order dated 16.7.2019 in OA no. 916 of 2018 in the matter of Sobha Singh and Others V/s State of Punjab has ordered as under:

> *"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."*

2. The industry shall maintain monthly water balance statement stating the quantity of underground water withdrawal, quantity of water used in the different processes, wastewater generation, sludge generation during the treatment, quantity of wastewater passed through RO system, quantity permeate and rejects, quantity of water recycled into the processes and the quantity of treated wastewater discharged.

3. The industry shall dispose of its sludge from physico chemical treatment, secondary clarifier sludge and other waste material in an environmentally sound manner.

4. The industry shall carry out analysis of ground water and soil samples in the plantation area twice in a year to assess the characteristics of underground water and soil.

5. PPCB shall depute a team of officers of PPCB under the supervision of senior level officer in 3rd week of Nov, 2019 to analyze the quality of untreated and treated effluent w.r.t. all the parameters including TDS parameter by conducting 24 hours comprehensive study and submit comments as to whether RO reject can be allowed to be discharged in the plantation area or it requires evaporation and drying by providing Multi Effect Evaporator followed by dryer and need to send the dried sludge to TSDF, Nimbuan. Thereafter, PPCB may take action accordingly under information to the Executive Committee.

3.1.2.2 M/s T.C. Terrytex Ltd., Vill. Sarsini, Tehsil DeraBassi, Distt. Mohali.

Recommendations

In view of the analysis results of the effluent samples collected from various points, discussion on the analysis results and observations of the committee, the following recommendations are made:

1. Chairman, PPCB shall initiate the following action under the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

   a) Impose an environment compensation amounting to Rs. 25 lakh upon the industry and the said amount may be utilized for restoration of quality of environment.

   b) Issue directions to the industry that it shall operate its effluent treatment plant efficiently & effectively and the treated effluent conforming to the standards shall be discharged in well developed plantation area with proper distribution network in such a way that the treated wastewater is utilized properly. The treated effluent conforming to the standards may be allowed to be discharged onto land for plantation provided the concentration of TDS is always below the permissible value of 2100 mg/l, otherwise, the industry shall install multi effect evaporator followed by dryer and the dried sludge may be sent to TSDF, Nimbua.

   c) The industry shall install OCEMS at the inlet to ETP by 31.01.2020 to monitor the parameters namely pH, BOD, COD, TSS & TDS so that the effluent with actual concentration of the parameters may enter into effluent treatment plant.

   With regard to environment compensation to be imposed on the polluter, the Hon'ble NGT in para no. 16 of its order dated 16.7.2019 in OA no. 916 of 2018 in the matter of Sobha Singh and Others V/s State of Punjab has ordered as under:

   "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."

2. The industry shall maintain monthly water balance statement stating the quantity of underground water withdrawal, quantity of water used in the different processes, wastewater generation, sludge generation during the treatment, quantity of wastewater passed through RO system, quantity permeate and rejects, quantity of water recycled into the processes and the quantity of treated wastewater discharged.

3. The industry shall dispose of its sludge from physico chemical treatment, secondary clarifier sludge and other waste material in an environmentally sound manner.

4. The industry shall carry out analysis of ground water and soil samples in the plantation area twice in a year to assess the characteristics of underground water and soil.

5. PPCB shall depute a team of officers of PPCB under the supervision of senior level officer in 3rd week of Nov, 2019 to analyze the quality of untreated and treated effluent w.r.t. all the parameters including TDS parameter by conducting 24 hours comprehensive study and submit comments as to whether RO reject can be allowed to be discharged in the plantation area or it requires evaporation and drying by providing Multi Effect Evaporator followed by dryer and need to send the dried sludge to TSDF, Nimbuan. Thereafter, PPCB may take action accordingly under information to the Executive committee.

The report on visit to above industries and recommendations made in the case of each industry were sent to Chairman, Punjab Pollution Control Board, Patiala vide No. CEC/2019/529, dated 1.11.2019 **(Annexure-3)**.

3.1.3 Visit to the industries of Kala Amb Area (Himachal Pradesh) on 15.10.2019

The Executive Committee visited the industries of Kala Amb Area (H.P.) on 15.10.2019 and recommendations made by the Executive Committee are as under:

3.1.3.1 M/s Ruchira Papers Limited, Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmaur (HP)

Recommendations

In view of the analysis results of the parameters namely COD, BOD and TSS, which are higher than the permissible limits and observations of Executive Committee, the following recommendations are made:

Chairman, Himachal Pradesh Pollution Control Board shall take action to issue following directions under the provisions of the Water (Prevention and control of pollution) Act, 1974.

1. Revoke the consent to operate granted to both the unit I and unit II of the industry under the provision of the Water (Prevention and control of pollution) Act, 1974.
2. To impose an Environment Compensation amounting to Rs. 50 lakh separately each on unit -1 and unit -2 of the industry for damaging the environment and aquatic life. The said amount may be utilized for rejuvenation of the quality of environment.
3. To reduce the production capacity of units 1 and unit 2 of the industry by 20%.
4. Chairman, HPPCB shall issue directions under the provisions of the Water Act, 1974 to the industry that it shall not discharge its effluent into drain / Jattan Wala Nallah/river and shall make some alternative arrangements such as utilization of treated effluent for irrigation /plantation. The industry shall change the mode of disposal of treated effluent from Jattan Wala Nallah to land for irrigation / plantation within 3 months.
5. The industry shall upgrade its effluent treatment plant within 3 months to achieve the standards prescribed by the regulatory authority .
6. The Industry shall construct a masonry wall of 3m height toward the drain so as to rule out any possibility of discharge of effluent into the drain and shall make clear demarcation between the components of effluent treatment plant and the drain and there should be no intermingling of internal drainage system of the industry (unit I and unit II) with the main drain (Jattan Wala Nallah) by 31.12.2019.

3.1.3.2 Sarv Boi Lab Pvt. Ltd. Trilokpur road, kala Amb, Tehsil Nahan, District Sirmour, HP:

Recommendations

Keeping in view of the analysis results of effluent samples and observations of the Executive Committee, the following recommendations are made

Chairman Himachal Pradesh Pollution Control Board shall take action to issue following directions under the provisions of the Water (Prevention and control of pollution) Act, 1974

1. Revoke the consent to operate under the provision of the Water (Prevention and control of pollution) Act, 1974.
2. To impose an Environment Compensation amounting to Rs. 20 lakh on the industry for damaging the environment and aquatic life by way of discharging partially treated effluent, not conforming to the standards, into Jattawala nallah

leading to Markanda river The said amount may be utilized for rejuvenation of the quality of environment.

3. To reduce the production capacity of the industry by 20%. The industry shall upgrade its effluent treatment plant to achieve the prescribed standards within 3 months.

4. The industry shall not discharge its treated / untreated effluent into drain/nallah/river and it shall make some alternative arrangements for disposal of treated effluent within 3 months.

Chairman Himachal Pradesh Pollution Control Board shall depute a team under the supervision of senior level officer of the Board to conduct comprehensive study of the industry for 24 hours on 15.12.2019 to assess performance of physico chemical treatment and aerobic biological treatment system and submit its report to the Board for further action under intimation to the Executive Committee.

The report on visit to the said industries alongwith recommendations made by the Executive Committee in the case of each industry were sent to Chairman, Himachal Pradesh Pollution control Board vide No. CEC/2019/540, dated 14.11.2019 **(Annexure-4).**

3.1.4 Report on visit to the industries of Chandigarh area on 8.11.2019 by the Executive Committee

The Executive Committee visited the industries of Chandigarh area on 8.11.2019 and recommendations made in case of each industry are mentioned as under:

3.1.4.1 M/s Ashoka Furniture Udyog, Plot no. 304, Phase-II, Industrial Area, Chandigarh:

Recommendations

The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :

i) To impose an environment compensation amounting to Rs.15 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.

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

iii) To revoke authorisation granted under the provisions of the Hazardous Waste Management Rules, 2016

iv) To issue directions under the provisions of the Water Act, 1974 for closure of the industry.

v) To issue directions to the industry that it shall operate its effluent treatment plant effectively and efficiently at all the times to meet with the standards prescribed by the CPCC and ETP may be upgraded within 3 months.

vi) The sludge generated from the operation of effluent treatment plant shall be dried properly, packed in HDPE bags and dispose off the same to TSDF Nimbuan.

vii) The industry shall maintain daily record of water used in the processes of the industry, wastewater discharge and quantity of sludge generated during the operation of the effluent treatment plant.

viii) The industry shall maintain proper record of chemicals used for treatment of effluent mentioning the total quantity of each chemical available before treatment, quantity of chemicals used in the treatment of effluent and balance quantity of chemical after the completion of the treatment process.

ix) The industry shall submit water balance statement to CPCC and CPCC shall verify the said statement to ensure that the wastewater discharge may commensurate with the quantity of water used in the process.

3.1.4.2 M/s Avon Rims Pvt. Ltd., Plot no. 69, Industrial Area, Phase-I, Chandigarh:

Recommendations

Since on the day of visit, the effluent samples of the industry could not be collected, therefore, the Executive Committee recommends that Chairman, CPCC shall depute a team of officers of CPCC along with officer of MOEFF&CC to carry comprehensive study of processes the industry and treatment mechanism w.r.t manufacturing processes of the industry, source of generation of effluent, quantification of effluent of each stream, technology provided to treat the electroplating effluent and any other effluent and the performance of the effluent treatment plant. The team shall quantify the generation of hazardous sludge and its corroboration with the quantity of effluent treated in the treatment system as the industry is consistently entering 20kg/day of hazardous sludge in the register which seems to be a fabricated record to match with the total quantity of hazardous sludge generated per year.

The status of installation of OCEMS and CCTV cameras on the important components of the effluent treatment plant and their connectivity with CPCB and CPCC may also be reported by the team.

The Team shall check the compliance of condition of consent granted to the industry under the provisions of Water Act, 1974, Air Act, 1981 and authorization under the Hazardous Waste Management (HWM) Rules, 2016. The authenticity of frequency of disposal of Hazardous Waste to TSDF and total quantity of hazardous sludge lifted in a year w.r.t quantity of hazardous waste generated in the year may be ascertained.

The team shall submit its detailed report along with recommendations within 21 days to the Chairman, CPCC under intimation to the Executive Committee. Further, the Chairman CPCC shall take necessary action on the recommendations of the team within 15 days and action taken report be submitted to the Executive Committee within next 7 days.

3.1.4.3 M/s Atul Industries, Plot no. 799, Industrial Area, Phase-II, Chandigarh:

Recommendations

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :
   i) To impose environment compensation amounting to Rs.5 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.
   ii) To revoke consent to operate granted to the industry under the provisions of Water Act, 1974.
   iii) To revoke authorisation granted under the provisions of the Hazardous Waste Management Rules, 2016
   iv) To issue directions to the industry that it shall operate its effluent treatment plant effectively and efficiently at all the times with required quantity of chemicals to meet with the standards prescribed by the CPCC.
   v) The sludge generated from the operation of effluent treatment plant shall be dried properly, packed in HDPE bags and shall dispose off the same on monthly basis to TSDF, Nimbuan.
   vi) The industry shall maintain proper record of water used in the processes of the industry, wastewater discharge and quantity of sludge generated during the operation of the effluent treatment plant.
   vii) The industry shall maintain proper record of chemicals used for treatment of effluent mentioning the total quantity of each chemical available before treatment, quantity of chemicals used in the treatment of effluent and balance quantity of chemical after the completion of the treatment process.
   viii) The industry shall submit water balance statement to CPCC and CPCC shall verify the said statement to ensure that the wastewater discharge may commensurate with the quantity of water used in the process.

3.1.4.4. M/s Jai Ambey Steel Industries, Plot no. 301, Industrial Area, Phase-II, Chandigarh

Recommendations

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :
   i) To impose an environment compensation amounting to Rs.10 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.
   ii) To revoke consent to operate granted to the industry under the provisions of Water Act, 1974.

iii) To revoke authorisation granted to the industry under the provisions of the Hazardous Waste Management Rules, 2016

iv) To issue directions under the provisions of the Water Act, 1974 for closure of the industry.

v) To issue directions to the industry that it shall operate its effluent treatment plant effectively and efficiently at all the times to meet with the standards prescribed by the CPCC and ETP shall be upgraded within 3 months..

vi) The sludge generated from the operation of effluent treatment plant shall be dried properly, packed in HDPE bags and dispose off the same to TSDF Nimbuan

vii) The industry shall maintain proper record of water used in the processes of the industry, wastewater discharge and quantity of sludge generated during the operation of the effluent treatment plant.

viii) The industry shall maintain proper record of chemicals used for treatment of effluent mentioning the total quantity of each chemical available before treatment, quantity of chemicals used in the treatment of effluent and balance quantity of chemical after the completion of the treatment process.

ix) The industry shall submit water balance statement to CPCC and CPCC shall verify the said statement to ensure that the wastewater discharge may commensurate with the quantity of water used in the processes.

3.1.4.5. M/s Groz Beckert Asia Pvt. Ltd., Plot no. 177-A, Industrial Area, Phase-I, Chandigarh

Recommendations

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :

   i) To impose an environment compensation amounting to Rs. 20 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.

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

   iii) To issue directions to the industry that it shall make necessary arrangements to provide chlorination or any other disinfectant or UV system in place by 31/12/2019 to kill the Total Coliform and Fecal Coliform to the level that these may come down to the permissible value of 1000 MPN/100 ml.

   iv) The treated sewage after conforming to all the parameters including F.Coli and T.Coli shall be utilized for gardening/parks/horticulture purposes.

   v) The secondary sludge generated from the STP may be utilised as manure in the gardens and parks.

The report along the recommendations were sent to Chairman, Chandigarh Pollution Control Committee vide letter no. CEC/2019/561 dated 28.11.2019 **(Annexure-5).**

3.1.5 Visit to the industries of Panchkula Area (Haryana) and Dera Bassi area (Punjab) on 19.11.2019 by the Executive Committee

The Executive Committee visited the industries of Panchkula area (Haryana) and Dera Bassi (Punjab) on 19.11.2019 and the recommendations made in the case of each industry are mentioned as under:

3.1.5.1 M/s VMS Metal Works Pvt. Ltd, Plot No. 278-279, Industrial Area, Phase-I, Panchkula:-

Recommendations

1. Chairman, HSPCB, shall initiate action to issue following directions to the industry under the provisions of Water Act, 1974:
   i. To impose an Environment Compensation amounting to Rs. 15 lakhs upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.
   ii. To issue directions for closure of the industry.
   iii. To revoke consent to operate under the provisions of Water Act, 1974.
   iv. Regarding operation of ETP, the industry shall make arrangements in such a way that all the components of ETP should be made operational at all the times. For drying of sludge, to be generated from the operation of physico chemical treatment system, filter press of suitable capacity may be installed and for its further drying, it shall provide sludge drying beds of adequate capacity and ensure that no wet sludge / semi solid sludge is packed in HDPE bags. The stored sludge may be disposed off to TSDF within the time schedule.
   v. The industry shall provide flow meter at the inlet and outlet of effluent treatment plant and proper record of effluent treated per day and quantity of hazardous sludge generated per day.

3.1.5.2 M/s Dynamic Enterprises, Plot No. 186, Industrial Area Phase-I, Panchkula:

Recommendations

1. Chairman, HSPCB, shall initiate action to issue following directions to the industry under the provisions of Water Act, 1974:
   i. To impose an Environment Compensation amounting to Rs. 20 lakh upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.
   ii. To issue directions for closure of the industry.

iii. To revoke the consent to operate under the provisions of Water Act, 1974.

iv. Regarding operation of ETP, the industry shall make arrangements in such a way that all the components of ETP should be made operational at all the times. For drying of sludge, to be generated from the operation of physico chemical treatment system, filter press of adequate capacity may be installed and for its further drying, it shall provide sludge drying beds of adequate capacity and ensure that no wet sludge / semi solid sludge is packed in HDPE bags. The stored sludge may be disposed off to TSDF within the time schedule.

v. The industry shall provide flow meters at the inlet and outlet of effluent treatment plant and proper record of effluent treated per day and quantity of hazardous waste generated per day.

3.1.5.3 M/s Horometrical Devices India Pvt. Limited, Plot No. 25, Industrial Area, Phase-II, Panchkula:-

Recommendations

1. Chairman, HSPCB, shall initiate action to issue following directions to the industry under the provisions of Water Act, 1974:

   i. To impose an Environment Compensation amounting to Rs. 20 lakhs upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.

   ii. The industry shall make arrangements in such a way that all the components of ETP should be made operational at all the times. For drying of sludge, to be generated from the operation of physico chemical treatment system, filter press of adequate capacity may be installed and for further drying of the sludge, it shall provide sludge drying beds of adequate capacity and ensure that no wet sludge / sludge in slurry form is packed in HDPE bags. The stored sludge may be sent to TSDF within the time schedule.

   iii. The industry shall provide flow meters at the inlet and outlet of effluent treatment plant and maintain proper record of effluent treated per day and the quantity of hazardous sludge generated per day.

3.1.5.4 M/s Torque Pharmaceuticals, Village Issapur, P.O. Dappar, Tehsil Dera Bassi, Distt. SAS Nagar

Recommendations

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

i. To impose an Environment Compensation amounting to Rs. 40 lakhs upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.

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

iii. To issue directions for closure of the industry.

iv. The industry shall upgrade its effluent treatment plant within 3 months so that the industry may meet with all the standards prescribed for such type of industries.

v. The production capacity of the industry shall be reduced by 20%.

The report along the recommendations were sent to the Chairman, Haryana State Pollution Control Board and Punjab Pollution Control Board vide letter no. CEC/2019/567-568 dated 5.12.2019 **(Annexure-6).**

3.1.6 Report on the visit to the industries of Parwanoo area (H.P.) on 25.11.2019 by the Executive Committee

The Executive Committee visited the industries of Parwanoo area on 25.11.2019 and the recommendations made in the case of each industry are mentioned as under:

3.1.6.1 Federal Mogul Bearings India Pvt. Ltd. Plot No. 5, Sector-02, Industrial Area, Parwanoo

Recommendations

In view of the analysis results of the treated effluent sample and components of effluent treatment plant installed by the industry to treat the electroplating effluent, the Executive Committee observed that the industry is meeting with the prescribed norms and is operating with the valid consents of the Board under the provisions of the Water Act, 1974, Air Act, 1981 and valid authorization under the provisions of Hazardous Waste Management Rules, 2016. The industry is a compliant unit w.r.t environment laws. However, there is a small observation of the Executive Committee that the industry should construct small boundary around the filter press with proper slope towards the drainage system to avoid the spreading of filtrate of filter press in the premises of the industry. Chairman, HPPCB shall convey the said observation to the industry with the direction for compliance within 15 days and submit action taken report within one month.

3.1.6.2 Gabriel India Pvt Ltd. Plot No. 05, Sector-02, Industrial Area Parwanoo

Recommendations

Chairman, HPPCB shall initiate action to issue directions under the provisions of the Hazardous Waste Management Rules, 2016 as under:

1) To impose an environment compensation amounting to Rs. 35 Lakh as per law and under the provisions of the Hazardous Waste Management Rules, 2016.

2) To revoke the authorization granted to the industry under the provisions of the Hazardous Waste Management Rules, 2016 and consent to operate under the provisions of Water Act, 1974.

3) The industry shall utilize its treated effluent for plantation and gardening purposes and shall not discharge any effluent into Samtel Nallah.

4) The industry shall construct a pucca room with lintel roof, impervious walls and floor of adequate capacity as per the provisions of the Hazardous Waste Management Rules, 2016 within 2 months. The sludge, presently stored in the temporary storage shed, should be disposed off to TSDF immediately.

5) The leach of the stored sludge in the temporary storage shed should be treated adequately in the presence of responsible officer of Himachal Pradesh Pollution Control Board before its discharge onto land for plantation.

6) Chairman, HPPCB shall depute a team under the headship of Senior Level Officer to carry out the comprehensive study of effluent treatment plant of the industry by collection 4 hourly composite sample for 24 hours for 2 days so that the actual treatment efficiency in terms of reduction in the values of various parameters in the existing ETP of the industry may be assess.

7) The industry shall get analyze the characteristics of soil of the plantation / gardening area, where the treated effluent shall be utilized, once in a year from the Agriculture University of Himachal Pradesh.

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

3.1.6.3 Tafe Motors & Tractors Ltd. Plot No. 29-30, Sector-02, Industrial Area Parwanoo.

Recommendations

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

i) To impose an environmental compensation amounting to Rs 15 lakh upon the industry. The said amount may be utilized for rejuvenation of the quality of the environment.

ii) The consent granted to the industry under the provisions of the Water Act, 1974 may be revoked.

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

The report along the recommendations were sent to the Chairman, Himachal Pradesh Pollution Control Board vide letter no. CEC/2019/612 dated 18.12.2019**(Annexure-7).**

3.2 Meetings with State Level Committee/Officers

3.2.1 15th meeting held with the State Level officers of the State of Himachal Pradesh under the Chairmanship of Justice Pritam Pal, Former Judge, Punjab & Haryana, High Court on 31.10.2019.

State of Himachal Pradesh

The Executive Committee held its 15th meeting with State Level Officers of State of Himachal Pradesh on 31.10.2019 and following directions were given:

Recommendations/Directions

1. For installation of 2 STPs each of capacity 1 MLD for treatment of sewage of Parwanoo area, the concerned department shall float tender by 31.12.2019 and STPs shall be installed and commissioned by 31.03.2021.
2. For installation of 1 CETP cum STP of capacity 5 MLD, immediate steps may be taken to get Environmental clearance from MOEFF&CC by SPV and the officers of HPPCB shall facilitate to get EC at the earliest. CETP cum STP shall be commissioned by 31.3.2021.
3. STP of capacity 2.5 MLD for treatment of sewage of villages Trilokpur, Johran and Kheri shall be installed by 31.3.2021
4. HPPCB shall inspect the water polluting industries falling in catchment area of Sukhna Nallah, Jattan Wala Nallah, River Markanda on monthly basis. Surprise inspection of the industries should also be carried out and action against the defaulting units may be taken under the provisions of the Water Act, 1974.
5. The State of Himachal Pradesh shall prepare Action Plan for utilization of treated sewage of the town Parwanoo and Kala Amb area for irrigation by 31.12.2019 and funds for the same shall be arranged.
6. HPPCB shall continue to analyse groundwater samples from different locations along the catchment area of Sukhna Nallah, Markanda River and Jattan Wala

Nallah as per the frequency already decided in the earlier meetings and data may be analyzed w.r.t. water quality of the ground water of the area.

7. Deptt. of Health & Family Welfare shall regularly conduct Health Check up Camps in the towns / villages located in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah.

8. District Level Special Task Force of the concerned districts should visit the industries and other water polluting sources on monthly basis and action may be recommended to HPPCB against the violating industries / culprits under intimation to Executive Committee.

9. HPPCB shall identify the pollution sources contributing high value of BOD (85 and 100 mg/l) and F.Coli (1600 and 16000 MPN/100ml) in Sector-4 Nallah before confluence with Sukhna Nallah within 7 days as observed during the monitoring carried out from April, 2019 to Sep, 2019 and take immediate steps to get install water pollution control measures from the responsible agencies.

10. HPPCB shall identify the pollution sources contributing high value of BOD (1500 and 1650 mg/l) and F.Coli (1600 and 32000 MPN/100ml) in Samptel Nallah, a contributory drain of Sukhna Nallah within 7 days as observed during the monitoring carried out from April, 2019 to Sep, 2019 and take immediate steps to get install water pollution control measures from the responsible agencies.

11. HPPCB shall continue to monitor the water quality of Sukhna Nallah, River Markanda and Jattan Wala Nallah and River Kaushalya at different locations as already earmarked and data may be analyzed w.r.t. improvement in the water quality of Sukhna Nallah, River Markanda and Jattan Wala Nallah.

The minutes of the meeting were sent to the concerned Officers of State of Himachal Pradesh vide letter no.CEC/2019/531 Dated 01.11.2019 and are annexed as per **(Annexure-8).**

3.2.2 15th meeting held with the State Level officers of the State of Haryana and State of Punjab under the Chairmanship of Justice Pritam Pal, Former Judge, Punjab & Haryana, High Court on 18.11.2019.

The Executive Committee held its 15th meeting with State Level Officer of State of Haryana and State of Punjab on 18.11.2019 and following recommendations/directions were made / given:

Recommendations/Directions

State of Haryana

1. All the new STPs shall be installed and Commissioned within the time schedule as mentioned at point No 1 (page 1) and these STPs shall achieve the standards as directed by Hon'ble NGT in OA No. 1069 of 2016 in the matter of Nitin

Shankar Desh Pandey V/s Union of India and others at BOD: 10 mg/l and other parameters.

2. All the STPs should be monitored for all the parameters including F. Coli parameter. STPs may be considered complaint, only if, these meet with the standards prescribed for all the parameters including F. Coli parameter.

3. All the STPs in the rural areas as proposed by the department of Panchayat shall be completed and commissioned by 31.12.2020.

4. The department of Public Health Engineering shall ensure that the treated sewage of all STPs may be utilized for gardening, construction activity and irrigation purposes in a time bound manner.

   However, regarding use of treated sewage for irrigation, its quality may be compared with water quality as prescribed by Agriculture University of the State.

5. The Executive Committee has observed that water quality of river Ghaggar has started degrading at the plant where Ghail drain meets river Ghaggar. Therefore, the concerned department of State of Haryana shall make efforts to install the remaining STPs and upgrade the existing STPs to meet the latest standards as directed by Hon'ble NGT in OA no. 1069 of 2018 in a time bound manner so that water quality in river Ghaggar may be improved.

6. The Chairman of the Executive Committee directed that wherever the groundwater quality is found unfit for drinking purpose, such water sources be capped and a display board mentioning that "**Water is not for drinking purpose**" may be placed.

7. OCEMS and CCTV cameras on all the STPs and ETPs of the industries as identified by the HSPCB should be installed by 31.12.2019. These STPs and ETPs should have their connectivity with HSPCB server.

8. The District Level Special Task Force shall also visit the industries/pollution sources and action against the violating industries/ responsible agencies of STPs may be recommended to HSPCB to take legal action as per the provision of Water Act, 1974.

9. In the health check up camps, the patients may be examined especially for water born diseases in the area which are located near the bank of river Ghaggar.

State of Punjab

1. All the new STPs should be installed and commissioned within the time schedule as mentioned at point no.1, pages (5-6) as above.

2. The upgradation of existing STPs and enhancement of capacity in STPs shall be made as per the time schedule mentioned at point no. 2, pages(6-7) as above.

3. All the STPs should be mentioned for all the parameters including F.Coli parameter. STPs may be considered compliant, only if, these meet with the standards prescribed for all the parameters including F.Coli parameter.

4. All the STPs, to be installed in rural areas, should be installed as per proposal made by the department of rural development and Panchayat and these may be installed before 31.3.2021.

5. The treated sewage of the town and rural areas may be utilized for irrigation purposes. The necessary irrigation schemes may be prepared and implemented by the department of soil and Water conservation/department of water resource in a time bound manner.

   However, regarding use of treated sewage for irrigation, its quality may be compared with water quality as prescribed by Agriculture University of the State.

6. PPCB shall increase the surveillance of industries by way of making surprise inspections/random checking of industries and legal action including imposing of environment compensation may be taken against the defaulting industries.

7. While comparing the data w.r.t BOD parameter in the river Ghaggar water for the months Jan to Oct of the year 2018 and 2019, it was observed that the value of BOD at Rattanheri has been found to be reduced from 55.5 mg/l to 26.10 mg/l, whereas the said value has been increased to 33.60 mg/l at the downstream of Sagar Para drain.

The Chairman of the Executive Committee took a serious view of the matter and constituted a committee of the following officers to carry out a detailed study of the pollution sources situated in the jurisdiction of the of States of Haryana and Punjab which are responsible for contributing high value of BOD in river Ghaggar at the downstream of Sagar Para drain and other points.

i. Sh. Krunesh Garg, Member Secretary, PPCB: Head of the Committee
ii. Sh. J.C. Babu , Additional Director, CPCB: Member
iii. Sh. S.S. Matharu, Environmental Engineer, PPCB: Member
iv. Sh. J.P. Singh, Environmental Engineer, HSPCB: Member.

The Committee shall submit its report within one month.

8. The Chairman of the Executive Committee directed that wherever the groundwater quality is found unfit for drinking purposes, such water sources be capped and a display board mentioning that **"water is not fit for drinking purposes"** may be placed**.**

9. CCTV Cameras should be installed on the remaining 3 STPs by 30.11.2019 and OCEMS on all the 20 STPs should be installed by 31.03.2020.

10. OCEMS in the remaining industries should be installed by 31.12.2019, failing which suitable directions be issued under the provisions of Water Act, 1974 including imposing of environment compensation of suitable amount.

11. The District Level Task Force shall visit the industries/pollution sources on monthly basis and legal action against the violating industries/responsible agencies for the pollution sources may be recommended to PPCB to take action under the provisions of Water Act, 1974.

12. In health checkup camps, the patients may be examined especially for water borne diseases in the areas which are located near the bank of River Ghaggar.

The minutes of the meeting held with State Level Officers of State of Haryana and Punjab were circulated to the concerned officers of both the States and the same are annexed (**Annexure-9**).

3.2.3 15th Meeting of the Executing Committee held with the officers of U.T., Chandigarh on 22.10.2019.

U.T. Chandigarh

Recommendations/directions

1. Adequate publicity through Press releases etc. be given to inspections conducted by DLSTF and information regarding complying and non-complying industries be made available in public domain. CPCC should be actively engaged in creating awareness among public and industry.

2. It was observed that GMCH, Sector-32 and Govt. Hospital Sector-48 do not have their own STPs. It was directed that CPCC should look into the matter and ensure that wastewater should be given primary treatment before its discharge in sewer.

3. Environmental compensation of suitable amount should be imposed against violating industries.

4. Standards of Primary effluent treatment plant joining CETP should be finalized at the earliest possible.

5. The matter be taken up with Punjab Pollution Control Board and Government of Punjab regarding installation of new CETP based on Zero Liquid Discharge Technology in the industrial area near Kurali.

6. Report submitted by Additional Chief Inspector of factories was found un satisfactory. He was directed to submit a modified report w.r.t. observations, action taken, work zone area, display boards, safety gears, chemical storage, air emissions and ventilation to be provided in the industries especially electroplating industries which generate toxic emissions and may affect health of the workers.

7. Provision of flow meter should be provided at all the STPs at by-pass channel, inlet and outlet. Opening of by-pass system during heavy rains or in exigency and its closing should be done in the presence of officers of CPCC.

8. All the STPs should maintain records w.r.t. daily electric supply consumption, sludge generation/disposal. Flow meter readings of inlet and outlet & real time monitoring system should have their connectivity with CPCB server.

9. MC should work out the possibilities of re-use of treated wastewater of STPs by industries.

10. MC will provide the details of SCADA system to CPCC.

11. Committee members were not satisfied with the performance of STPs which were not meeting with the standards and directed that MC may appoint NEERI or any consultant agency to find out the reasons for performance not upto the laid down standards and accordingly take appropriate measures so that all the non-complying STPs may meet with the prescribed norms.

12. CPCC should check the point sources mixing into Sukhna Choe and N-choe to find out the reasons for such high BOD and COD values.

13. Wastewater of Govt. hospitals if leading to terminal STP, may be imparted primary treatment facility at hospital itself.

14. MC should take action against the violators who are burning garbage and intimate the committee about the action taken. MC may also organize workshops for all the employees to make them aware the ill impact of garbage/leaves burning and MC may also give due publicity w.r.t. workshops and action taken against violators.

15. Data of drains/STPs/river should be available in public domain like website of CPCC and Chd. Admn.

16. Department of Health should provide the data w.r.t. the patients which have been found affected with waterborne diseases.

17. In the next meeting, Director, Health services and Director, Education should also be invited to brief the committee regarding the details w.r.t. discharge of waste (i.e. sanitary napkins from girl's hostels/High Schools).

18. Committee members directed to compare the current data of drains with previous data of five years for analysis to identify the trends.

19. CPCC should organize workshops at the earliest for the electroplating industries to sensidize them and share the best practices to be replicated.

20. Commissioner, Municipal Corporation has given details about waste segregation and he was advised to provide the timelines in the next meeting.

21. CPCC should impose an environment compensation of suitable amount on the Municipal Corporation in case the STPs fail to achieve with the prescribed norms.

These minutes were sent to Member Secretary, CPCC, Chandigarh vide letter no. CEC/2019/512-516 dated 24.10.2019**(Annexure-10)**.

It is mentioned here that the concerned Officers of State of Punjab, Haryana, Himachal Pradesh and U.T. Chandigarh have been clarified that the Hon'ble National Green Tribunal vide its order dated 22.11.2019 in OA No. 138/139 of 2016 has revised the timelines for installation of STP in Para No. 23, which is mentioned at page no. 2 of the report.

3.3 Meeting with District Level Special Task Force

3.3.1 Meeting with District Level Special Task Force (DLSTF) of District Solan on 25.11.2019 at Parwanoo (HP).

Recommendations/Directions

1. 2 STPs each of capacity 1 MLD for treatment of sewage of Parwanoo area and adjoining Panchayat/village areas shall be installed and commissioned by 31.03.2021.
2. 01 new STP of capacity 70 KLD to treat the sewage of village Khadeen shall be completed and commissioned by 15.12.2019.
3. The State of Himachal Pradesh shall prepare Action Plan for utilization of treated sewage of the town Parwanoo for irrigation by 31.12.2019 and funds for the same shall be arranged. However, in the mean time, the treated sewage shall be utilized for gardening and toilet flushing.
4. HPPCB shall continue to analyze groundwater samples from different locations along the catchment area of Sukhna Nallah as per the frequency already decided in the earlier meetings and data may be analyzed w.r.t. water quality of the ground water of the area.
5. Regular Health Check up Camps may be organized by the Department of Health in Parwanoo towns and adjoining villages located in the catchment area of Sukhna Nallah.
6. Regular visits of the water polluting industries and other pollution resources may be carried out by District Level Special Task Force on monthly basis and action against the violating industries / culprits may be recommended to HPPCB.
7. DLSTF shall conduct monthly meeting on regular basis and minutes of the meeting may be uploaded on the website of HPPCB.
8. The officers of regional office Parwanoo shall carry out inspection of industries as per the schedule prescribed by CPCB and Hon'ble NGT and action against the defaulting industries be taken as per the provision of the Water Act, 1974.

9. Water quality of Sukhna Nallah and kaushalya river shall be monitored at different locations and data may be analyzed w.r.t. improvement in the water quality of Sukhna Nallah and kauslalya river.

10. HPPCB shall ensure that all the water polluting industries of Parwanoo area shall provide OCEMS and CCTV cameras by 28.2.2020.

11. For the management of rotten apples, HPPCB shall pursue APMC and HIMFED to prepare the action plan and ensure that this waste is managed on priority basis.

With regard to timelines for completion and commissioning of STPs by the State of Himachal Pradesh, it has been clarified all the STPs should be commissioned within the time lines as mentioned in Para No. 23 of order dated 22.11.2019 of Hon'ble Tribunal in OA No. 138/139 of 2016.

3.3.2 Meeting held with the District Level Task Force of District Panchkula (Haryana) on 10.12.2019.

The Executive Committee held a meeting with the District Level Special task Force and other officers of the District Panchkula (Haryana) on 10.12.2019, wherein the agenda points relating to Municipal Solid Waste Management, Bio-medical Waste Management and control of pollution in river Ghaggar were discussed and directions given/recommendations made w.r.t control of pollution in river Ghaggar are mentioned as under.

Directions/Recommendations

1) The concerned departments of State of Haryana, responsible for operation of existing STPs of the district, shall install adequate system to disinfect the treated sewage of STPs to reduce the F.coli parameter to the prescribed norms of 1000 MPN/100 ml by 31.3.2020.

2) The concerned departments of State of Haryana, shall install and commission STP of capacity 0.75 MLD at Billa by 30.9.2020. STPs at Kot, Toka, Sukhdarshanpur, Kahtauli and Nagal shall be installed and commissioned by 30.6.2020. STPs at Saketri and Khanguwal shall be installed and commissioned by 31.3.2021.

3) The concerned department of State of Haryana shall upgrade its existing STPs of capacity 5 MLD at Pinjore to meet with the prescribed standards of BOD as 10 mg/l by 31.3.2020.

4) The department of irrigation and department of soil conservation of State of Haryana shall lay irrigation network to utilize the treated sewage of all the existing STPs of the districts for irrigation by 30.6.2020.

5) HSPCB shall make surprise visits to industries from time to time and shall take action against the violating industries.

6) The Chairman of the Executive Committee observed that District Level Special Task Force (DLSTF) has not visited any industry and no punitive action has been initiated against any violating industry and took a serious view of it. He directed that DLSTF shall visit water polluting industries located in the catchment area of river Ghaggar from time to time and recommend action against the violating industries to HSPCB.

7) HSPCB shall also analyze F.coli parameter during the monitoring of water quality of river Ghaggar.

8) HSPCB shall issue necessary directions to the concerned department not to allow the use of water of tubewell installed near the dumping ground sector-23, Panchkula for drinking purposes and a display board mentioning **"water of tube well is not fit for drinking purposes"** be erected at this point.

9) HSPCB shall issue necessary directions to the concerned department to install and commission OCEMS on STP of capacity 9 MLD by 28.2.2020.

10) The department of health shall ensure that more health camps are organized for the localities which are located on the catchment area of river Ghaggar.

With regard to timelines for completion and commissioning of STPs by the State of Haryana, it has been clarified all the STPs should be commissioned within the time lines as mentioned in Para No. 23 of order dated 22.11.2019 of Hon'ble Tribunal in OA No. 138/139 of 2016.

3.3.3 Meeting held with the District Level Task Force of District Mohali (Punjab) on 11.12.2019.

The directions given/recommendations made during the meeting are mentioned as under:

1) PPCB shall constitute a team under the headship of senior Environmental Engineer, Zonal Office, Patiala to carry out composite sampling of influent and effluent of STP, Zirakpur for 24 hours for 3 days and identify the reasons for high value of oil & grease at the inlet of the STP. Further, the detailed study w.r.t operation of STP may also be carried out. The above composite sampling and study w.r.t STP shall be carried out within 15 days.

2) PWSSB shall ensure that tenders for small STPs (Ghollumajara and Dappar, Issapur) shall be called within one week and processed expeditiously for allotment of work order.

3) Deputy Commissioner, Mohali shall resolve the issue (With regard to pending court litigation in case of STP Lalru), by intervention at his level and consultation with the local residents.

4) PWSSB shall file special application before the Hon'ble court for vacation of stay order w.r.t STP, Lalru.

5) GMADA, Mohali shall upgrade STP, Mohali of capacity 45 MGD, which is presently based on UASB technology, by 31.3.2021 to meet the stringent parameters along with BOD as 10 mg/l.

6) Department of Soil and Water Conservation shall lay irrigation schemes for utilization of treated sewage of all the STPs of District Mohali by 31.3.2020.

7) PPCB shall make surprise visits of the industries from time to time and action would be taken against the defaulting industries as per law and under the provision of the Water Act, 1974.

8) As per the information placed before the Executive Committee, DLSTF has not visited any industry located in the catchment area of river Ghaggar. District Level Special Task Force (DLSTF) has not visited any industry and no action has been initiated against any of violating industries The Chairman of the Executive Committee took a serious view and directed that DLSTF shall visit water polluting industries located in the catchment area of river Ghaggar from time to time and action be recommended against the violating industries to PPCB.

9) STPs located in the catchment area of river Ghaggar shall be upgraded so that the values of F.coli and BOD be reduced to 1000 MPN/100 ml and 10 mg/l, respectively.

10) PPCB shall monitor the groundwater quality of 14 hotspots located in the catchment area of river Ghaggar and analysis reports of the groundwater samples may be placed before the Executive Committee in its next meeting.

11) PPCB shall get OCEMS and CCTV cameras installed in the remaining one industry by 31.1.2020 failing which legal action be initiated under the provisions of the Water Act, 1974.

12) PWSSB shall install OCEMS on all the STPs of District Mohali, falling in the catchment area of river Ghaggar, by 31.3.2020.

13) Department of Health shall continue to organize more health checkup camps in the residential areas located in the catchment area of river Ghaggar.

It is mentioned here that the concerned Officers of State of Punjab, Haryana, Himachal Pradesh and U.T. Chandigarh have been informed that the Hon'ble National Green Tribunal vide its order dated 22.11.2019 in OA No. 138/139 of 2016 has revised the timelines for installation of STPs as mentioned in para no. 23, which is mentioned at page no. 2 of the report.

3.4 Current Status w.r.t. performance of existing STPs, installation of new STPs, upgradations of existing STPs, status of STPs where no funds have been tied up, gap in treatment of Sewage, utilization of treated sewage for irrigation and installation of STPs for treatment of sewage of villages, inspection of industries by the regulatory bodies, compliance report of the direction given/ recommendations made during the 15th meeting of State level committees, water quality of river Ghaggar, ground water quality of areas on catchment area of river Ghaggar etc.

3.4.1 State of Punjab

3.4.1.1 Performance of existing Sewage treatment plants

30 towns have been identified, which are directly/ indirectly discharging their sewage into river Ghaggar. In these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed and are in operation. The performance status of these 21 STPs, as per analysis results of treated sewage for the month of September to November,2019 is as under:

Sr. no.	Name of the Town	Capacity of STP	Performance w.r.t. parameters BOD, TSS, and F.Coli		
			Sep, 2019	Oct, 2019	Nov, 2019
1.	Banur	4	Complying	Complying	Complying
2.	**Baretta**	**3**	**Non complying**	**Non complying**	**Non complying**
3.	**Bhikhi**	3	**Non complying**	**Non complying**	**Non complying**
4.	Budhlada	6.5	Non complying	Complying	Complying
5.	Mandi Gobindgarh	25	Complying	Complying	Complying
6.	Samana	10	Complying	Complying	Complying
7.	**Sardulgarh**	4	**Non complying**	**Complying**	**Non complying**
8.	Sunam	8	Complying	Complying	Complying
9.	Zirakpur	17	Complying	Non complying	Complying
10.	Khanauri	3	Complying	Complying	Complying
11.	Lehragaga	4	Complying	Complying	Complying
12.	Moonak	3	Complying	Complying	Complying
13.	Patran	4	Complying	Complying	Complying
14.	Rajpura	7	Complying	Complying	Complying
15.		10	Complying	Complying	Complying
16.	SAS Nagar	45.4	Complying	Non complying	Complying
17.	MC Dera Bassi	4	Complying	Complying	Complying
18.	Lalru	1.5	Complying	Complying	Complying
19.	Patiala	46	Complying	Complying	Complying

20.		10	Complying	Complying	Complying
21.		13	Non complying	Complying	Complying

The above data indicate that out of these 21 STPs, 03 STPs (Baretta, Bhiki and Sardulgarh) are not complying with prescribed norms. Other STPs were complying with prescribed norms w.r.t. BOD, TSS and F.Coli parameters.

3.4.1.2 Status of STPs under construction

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/commissioning	% work done	
				Earlier status as on 31/12/2018 (% work done)	Current status as on 15/12/2019 (% work done)
1.	Boha	2	31.7.2020	Work allotted, drawings & design approved	15%
2.	Dhuri	5	31.7.2020	Land handed over to agency. Design is under process.	20%
3.	Sangrur	4	31.7.2020	Land handed over to agency. Design is under process.	20%
4.	Bassi Pathana	3	31.7.2020	Work allotted	8%
5.	Sirhind	2	31.7.2020	Work allotted	Pond water Diversion in progress
6.		4	31.7.2020	Work allotted	8%
7.		5	31.7.2020	Work allotted	10%
8.	Patiala	15			Work started

The above data indicate that construction work of STP for towns as mentioned above has been completed between 8-20%. These STPs shall be completed by 31.07.2020.

3.4.1.3 Status of STPs under planning and funds tied up

Sr. no.	Name of the town	STP Capacity (MLD)	Target date of completion/commissioning	Current status as on 15.12.2019
1.	Cheema	2	31.12.2020	• Tender called. To be opened on 24.12.2019
2.	Nabha	12	30.6.2021	• Tender called. To be opened on 20.12.2019
3.	Longowal	5	31.10.2020	• Tender called. To be opened on 24.12.2019
4.	Amloh	3	31.12.2020	• Case for final approval for land is in process in DLG Office.
5.	Dera bassi (Mirpur)	2	31.10.2020	• Tenders were called but rejected as rates were on higher side now DNIT

				revised and is under approval.
6.	Dera Bassi (Issapur)	2	31.10.2020	• Tenders were called but rejected as rates were on higher side now DNIT revised and is under approval.
7.	Lalru (Dappar)	1	31.10.2020	• DNIT being revised due to eligibility criteria.
8.	Lalru (Mandi)	1.5	Land Issue	• Court case by residents. Next date is 20.01.2020 for defence evidence.
9.	Ghanaur	2	31.10.2020	• Tenders were called but rejected as rates were on higher side now DNIT revised and is under approval.
10.	Dhuri	6	30.11.2020	• Land arrangement under process by MC, Dhuri. • Panchayat land identified. • The case is being sent by DC, Sangrur to Govt. for approval.
11.	Sangrur	11	30.11.2020	• Land feasibility report submitted to EO, MC Sangrur. • Now the case to be sent to DC Office by EO for price fixation.
12.	Bassi Pathna	0.2	30.06.2022	• As decided in the meeting held with SDM on 24.10.19, process started to transfer Govt. land.
13.	Gholu Majra	0.35	31.12.2020	• Details of new technology explored by Punjab Pollution Control Board received vide letter no. 16891-92, dated 25.07.19. Proposal under preparation.
14.	Chaundheri & Samalheri	0.35	31.12.2020	• Details of new technology explored by Punjab Pollution Control Board received vide letter no. 16891-92, dated 25.07.19. Proposal under preparation.
	Total	**48.4**		

The Executive Committee recommends that these STPs may be completed by 31.12.2020 as per the directions of Hon'ble NGT in Para No. 23 of order dated 22.11.2019 in OA No. 138/139 of 2016.

3.4.1.4 STPs under planning but funds yet to be tied up

Sr. no.	Name of the town	STP Capacity (MLD)	Current status as on 15.12.2019
1.	Bhadson	2	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
2.	Sanaur	4	Sewerage system do not exist and funds not tied up. Case sent to Government of Punjab for arrangement of funds.
	Total	**6**	

The Executive Committee recommends that all the above said STPs may also be completed by 31.12.2020 as per directions of Hon'ble NGT in order dated 22.11.2019 in OA No. 138/139 of 2016.

3.4.1.5 STPs which require technologically upgradation and funds yet to be 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 15.12.2019
1.	Bareta	3	3	31.12.2021	Funds not tied up. Case sent to Govt. of Punjab for arrangement of funds. In meeting held on 17.07.2019 of District Level Task Force, it has been desired to prepare DPR on SBR technology, therefore, DPR being again prepared.
2.	Bhikhi	3	3	31.12.2021	Funds not tied up. Case sent to Govt. of Punjab for arrangement of funds. In meeting held on 17.07.2019 of District Level Task Force, it has been desired to prepare DPR on SBR technology, therefore, DPR being again prepared.
3.	Sardulgarh	4	4	31.12.2021	Funds not tied up. Case sent to Govt. of Punjab for arrangement of funds. In meeting held on 17.07.2019

					of District Level Task Force, it has been desired to prepare DPR on SBR technology, therefore, DPR being again prepared.
4.	Mohali	45.5	45.5	--	GMADA is yet to submit the scheme for upgradation of existing UASBbased technology STP.
5	MES Patiala	6	6	31.1.2021	Tendering process started
6	MES Nabha	1.0	1.0	31.3.2021	Tendering process started
	Total	**62.5**	62.5		

The Executive Committee recommends that the above said STPs may be completed by 31.12.2020 as per the directions of Hon'ble NGT in order dated 22.11.2019 in OA No. 138/139 of 2016

3.4.1.6 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.	Banur	4.6	4	0.6
2.	Baretta	2.13	3	0
3.	Bhikhi	2.52	3	0
4.	Budhlada	5.5	6.5	0
5.	Khanauri	1.82	3	0
6.	Lehragaga	2.92	4	0
7.	Mandi Gobindgarh	10.02	25	0
8.	Moonak	2.34	3	0
9.	Mohali	24.35	45.4	0
10.	Patiala	70	46	14
			10	
		6	13	
11.	Pattran	3.7	4	0
12.	Rajpura	14.32	10	0
			7	
13.	Samana	6.95	10	0
14.	Sardugarh	2.69	4	0
15.	Sunam	7	8	0
16.	Zirakpur	13.87	17.3	0
17.	Bassi Pathana	2.53	0	2.53

18.	Boha	1.63	0	1.63
19.	Lalru	4.74	1.5	3.24
20.	Dera bassi	5.77	3.5	2.27
21.	Sirhind	7.54	0	7.54
			0	
			0	
22.	Amloh	2.28	0	2.28
23.	Cheema	1.5	0	1.5
24.	Dhuri	7.19	0	7.19
25.	Sangrur	11.32	0	11.32
26.	Nabha	7.81	0	7.81
27.	Longowal	3.26	0	3.26
28.	Sanaur	2.8	0	2.8
29.	Bhadson	0.93	0	0.93
30.	Ghanour	0.8	0	0.8
	Total	**240.83**	**231.20**	**69.70**

The Executive Committee recommends that the Department of Local Govt., Punjab and other concerned agencies of the State shall make necessary arrangements for planning, designing and installation of new STPs to treat the gap (69.7 MLD) in sewage by 31.12.2020.

3. 4.1.7 Inspection of industries (September 2019 to November2019)

Month	No. of industries inspected	No. of non-complying industries	Action taken against the industry
September, 2019	**11**	**2**	• One industry has been imposed bank guarantee of 1 Lakh as an assurance to comply with the environmental laws. • Environmental compensation amounting to Rs. 75000/- has been imposed due to non installation of OCEMS.
October , 2019	**6**	**1**	• Three units have been issued directions under section 33-A Water Act, 1974 vide letter dated 4.11.2019, as recommended by the Executing Committee. • One industry has been imposed environmental compensation amounting to Rs. 25 Lakh for violation of provisions of Water Act, 1974. • One industry has been imposed bank guarantee amounting to Rs. 15 Lakh for violation of provisions of Water Act, 1974. • One industry has been imposed bank guarantee amounting to Rs. 10 Lakh for violation of provisions of Water Act, 1974.

November, 2019	**11**	**2**	• One unit has been issued directions under section 33-A Water Act, 1974 vide letter dated 4.11.2019, as recommended by the Executive Committee. • Case of 2nd industry is under process

3.4.1.8 Compliance report on the directions given / recommendations made by the Executing Committee in its 15th meeting held on 18/11/2019 with State Level Officers of State of Punjab.

Sr. No.	Directions given/recommendations made in the 15th meeting held on 18.11.2019	Action taken report
1.	All the new STPs should be installed and Commissioned within the time schedule as mentioned at point no.1, pages (5-6) as above.	The Department of local Govt. is to ensure the compliance of this point.
2.	The upgradation of existing STPs and enhancement of capacity in STPs shall be made as per the time schedule mentioned at point no.2, pages (6-7) as above.	The Department of local Govt. is to ensure the compliance of this point.
3.	All the STPs should be monitored for all the parameters including F.Coli parameter. STPs may be considered compliant, only if, these meet with the standards prescribed for all the parameters including F.Coli parameters.	The Punjab Pollution Control Board is imposing all the four parameters such as pH, TSS, BOD and F.Coli to check the compliance of STPs.
4.	All the STPs, to be installed in rural areas, should be installed as per proposal made by the department of rural development and Panchayat and these may be installed before 31.03.2021.	The Department of Rural Development and Panchayat is to ensure the compliance of this point.
5.	The treated sewage of the towns and rural areas may be utilized for irrigation purpose. The necessary irrigation schemes may be prepared and implemented by the department of soil and Water conservation/department of water resources in a time bound manner. However, regarding use of treated sewage for irrigation, its quality may be compared with water quality as prescribed by Agriculture University of the State.	The Present Status of Irrigation Schemes from STPs is as per following • 9 irrigation schemes have been commissioned. • 2 irrigation schemes are under installation. • 4 Irrigation Projects sanctioned under Rural Infrastructure Development Funds (RIDF) by State Govt. but funds not released yet. • Funds not tied up for 4 STPs • Irrigation schemes from 4 STPs not feasible due to non availability of irrigation command area. • For 18 towns, irrigation projects have been prepared but funds are not tiedup.
6.	Punjab Pollution Control Board shall increase the surveillance of industries by way of making surprise inspections/random checking of industries and legal action including imposing of environment compensation may be taken against the defaulting industries.	PPCB assured to increase the surveillance of industries by making surprise inspections / random checking.
7.	While comparing the data w.r.t BOD parameter in the river Ghaggar Water for the months Jan to	The Committee constituted by the Executive Committee has already

	Oct of the year 2018 and 2019, it was observed that the value of BOD at Rattanheri has been found to be reduced from 55.5 mg/l to 26.10 mg/l, whereas the said value has been increased to 33.60 mg/l at the downstream of Sagar Para drain. The Chairman of Monitoring Committee took the matter seriously and constituted a committee of the following officers to carry out a detailed study of the pollution sources of State of Haryana and State of Punjab which are responsible for contributing high value of BOD in river Ghaggar at the downstream of Sagar Para drain and other points. 1. Sh. Krunesh Garg, Member Secretary, PPCB: Head of the Committee. 2. Sh. J.C. Babu, Additional Director, CPCB: Member 3. Sh. S.S. Matharu, Environmental Engineer, PPCB: Member 4. Sh. J.P. Singh, Environmental Engineer, HSPCB: Member. The Committee shall submit its report within one month:	planned to visit the sources of Pollution in river Ghaggar on 28 and 29.12.2019. The report of the Committee will be submitted after conduct of visit.
8.	The Chairman of the Monitoring Committee directed that wherever the groundwater quality is found unfit for drinking purposes, such Water sources be capped and a display board mentioning that **"Water is not fit for drinking purposes"** may be placed.	The minutes of the meeting have been conveyed to the PWSSB, Department of Water Supply and Sanitation, Department of Local Govt. and CGWB for ensuring compliance of this decision. Also a reminder is being issued to intimate the compliance of this decision.
9.	CCTV Cameras should be installed on the remaining 3 STPs by 30.11.2019 and OCEMS on all the 20 STPs should be installed by 31.03.2020.	Compliance of this decision shall be ensured by PPCB
10.	OCEMS in the remaining industries should be installed by 31.12.2019, failing which suitable directions be issued under the provisions of Water Act, 1974 including imposing of environmental compensation of suitable amount	Compliance of this decision shall be ensured by PPCB
11.	The District Level Task Force shall also visit the industries/pollution source on monthly bases and legal action against the violating industries/responsibility agencies for other pollution sources may be recommended to Punjab Pollution Control Board to take action under the provisions of Water Act, 1974.	Compliance of this decision shall be ensured by PPCB
12.	In health checkup camps, the patients may be diagnosed especially for water borne diseases in the areas which are located near the bank of River Ghaggar.	Compliance of this decision shall be ensured by PPCB

3.4.1.9 Comparison of water quality of River Ghaggar in terms of average values of BOD, D.O and T.Coli, (January to November, 2018 and January to November, 2019).

Sr. No.	Sampling location	Average values of the parameters as monitored in the month of January to November, 2018			Average values of the parameters as monitored in month of January to November, 2019			Improvement in the water quality of river Ghaggar w.r.t. to parameters
		BOD	DO	T. Coli	BOD	DO	T. Coli	
1.	Mubarikpur Rest House	10.5	4.4	20364	8.27	5.2	21727	Improvement w.r.t BOD and DO
2.	Bhankarpur	19.4	3.3	26636	22.36	3.9	30818	Improvement w.r.t DO parameter
3.	Chattbir	15.5	3.2	22091	18.45	3.5	26818	Improvement w.r.t DO parameter
4.	U/s Jharmal Nadi	16.7	3.0	21273	11.82	3.9	19091	Improvement w.r.t BOD, DO and T.Coli parameter
5.	D/s Jharmal Nadi	26.1	2.2	25636	17.09	3.0	23273	Improvement w.r.t BOD, DO and T.Coli parameter
6.	U/s Dhakanshu Nallah	12.4	3.3	15545	10.70	3.9	19000	Improvement w.r.t BOD and DO parameter
7.	D/s Dhakanshu Nallah	14.6	2.9	20091	15.80	3.3	25300	Improvement w.r.t DO parameter
8.	Rattanheri	52.4	2.5	31364	19.45	3.0	25454	Improvement w.r.t BOD, DO and T.Coli parameter
9.	U/s sagar para Drain	23.1	3.0	24143	21.00	3.5	27545	Improvement w.r.t BOD and DO parameter
10.	D/s Sagar Para Drain	40.7	2.0	30429	32.18	2.8	32364	Improvement w.r.t BOD and DO parameter
11.	Khanauri2.8	48.2	1.9	34909	23.82	3.1	23273	Improvement w.r.t BOD, DO and T.Coli parameter
12.	Moonak	31.1	2.1	27000	23.73	3.0	27454	Improvement w.r.t BOD and DO parameter
13.	U/s Sardulgarh	21.5	2.4	20582	16.55	4.3	17909	Improvement w.r.t BOD, DO and T.Coli parameter
14.	D/s Sardulgarh	23.8	2.2	24818	20.55	3.9	24818	Improvement w.r.t BOD and DO parameter

The above data indicate that the water quality of river Ghaggar has been improved during the period January to October, 2019 w.r.t BOD and DO parameters and improvement w.r.t Total coliform parameter has been found at 5 locations out of total 14 locations of river Ghaggar.

3.4.1.10 Ground Water Quality in the catchment area of river Ghaggar

PPCB has carried out groundwater sampling at 14 hot spot locations located in the vicinity of river Ghaggar prior to monsoon season and analysis results of which are given in the previous report submitted to the Hon'ble NGT. However, the water quality of these locations after monsoon season is yet to be carried out by the PPCB.

3.4.1.11 Status of Irrigation schemes for STPs

A) Towns/STPs where Irrigation Projects Commissioned

S. no.	Town	Name of STP	Capacity (MLD)	Command Area (ha)
1	Banur	Banur	4	120
2	Baretta	Baretta	3	150
3	Bhikhi	Bhikhi	3	165
4	Samana	Samana	10	324
5	Sardulgarh	Sardulgarh	4	128
6	Sunam	Sunam	8	240
7	Lehragaga	Lehragaga	4	110
8	Moonak	Moonak	3	70
9	Patran	Patran	4	120

B) Towns/STPs where Irrigation Projects Under Progress

S. No.	Town	Name of STP	Capacity (MLD)	Completion Date	Command Area (ha)	Remarks
1	Khanauri	Khanauri	3	30.6.2020	115	70% work completed
2	Rajpura	Rajpura -II	7	31.5.2020	185	75% work completed

C) Towns/STPs where Irrigation Projects Sanctioned

S. no.	Name of the Town	Name of STP	Capacity (MLD)	Completion Date	Command Area (ha)	Remarks
1	Mandi Gobindgarh	Mandi Gobindgarh	25	20 months after release of funds	925	Sanctioned under RIDF-25, funds not released yet
2	Patiala	Patiala- II	10	14 months after release of funds	444	Sanctioned under RIDF-25, funds not released yet
3	Dhuri	Dhuri - I	5	10 months after release of funds	185	Sanctioned under RIDF-25, funds not released yet
4	Sangrur	Sangrur -II	11	14 months after release of funds	407	Sanctioned under RIDF-25, funds not released yet

D) Towns/STPs where Funds Not Tied up for Irrigation Projects

Sr. no.	Name of the Town	Name of STP	Capacity (MLD)
Commissioned STPs			
1	Rajpura	Rajpura -II	10
2	Lalru	Lalru	1.5
3	Patiala	Patiala -I	46
4		Patiala - III	13

Under Progress STPs			
1	Boha	Boha	2
2	Cheema	Cheema	2
3	Bhadson	Bhadson	3
4	Nabha	Nabha	12
5	Dhuri	Dhuri -II	6
6	Sangrur	Sangrur - I	4
7	Bassi Pathana	Bassi Pathana	3
8	Longowal	Longowal	3
9	Amloh	Amloh	3
10	Dera Bassi	Dera Bassi -I	2
11	Dera Bassi	Dera Bassi -II	2
12	Lalru	Lalru (Mandi)	1.5
13		Lalru (Dappar)	1
14		Lalru (Gholu Majra)	0.35
15		Lalru (chaundheri Samalheri)	0.35
16	Sanour	Sanour	4
17	Ghanaur	Ghanaur	2
18	Sirhind	Sirhind - I	2
19		Sirhind -II	4
20		Sirhind -III	5

E) Towns/STPs where Irrigation Projects not feasible

S. no.	Name of the Town	Name of STP	Capacity (MLD)	Remarks
1	Budhlada	Budhlada	6.5	Farmers not willing to use water
2	Zirakpur	Zirakpur	17	Urbanized land, no irrigation command available. New STP being set up at other location, irrigation scheme proposed from that STP
3	SAS Nagar	SAS Nagar	45.4	Urbanized land, no irrigation command available.
4	MC Dera Bassi	MC Dera Bassi	4	Urbanized land, no irrigation command available.

3.4.1.12 Action taken against the operating agencies w.r.t non compliance of STPs during the period September to November, 2019

Town	Technology	Reason for non compliance	Action Taken
Bareta	WSP (to be upgraded to new technology)	Not meeting with pH, BOD, TSS & F.Coli	Notice issued under the Water Act, 1974 alongwith the opportunity of personal hearing on 16.8.2019, wherein, it was decided to impose Environmental Compensation. Accordingly, as calculated, the MC has been asked to deposit Rs. 9.20 lakhs on account of Environment Compensation.

Bhikhi	WSP (to be upgraded to new technology)	Not meeting with BOD & F.Coli	Legal action has been initiated under the Water Act, 1974 against the responsible officials.
Budhlada	MBBR	Not meeting with BOD & F.Coli	Action under the Water Act, 1974 is being initiated.
Sardulgarh	WSP (to be upgraded to new technology)	Not meeting with F.Coli	Notice issued under the Water Act, 1974 alongwith the opportunity of personal hearing on 16.8.2019, wherein, it was decided to impose Environmental Compensation. Accordingly, as calculated, the MC has been asked to deposit Rs. 4.60 lakhs on account of Environment Compensation.
Mohali	UASB	Not meeting with BOD	Notice issued under the Water Act, 1974 alongwith the opportunity of personal hearing on 30.7.2019, wherein, it was decided that the GAMADA shall upgrade its existing UASB based STP to new technology and submit timelines in this regard. The GMADA is yet to submit the scheme for upgradation of existing STP. Also, the MC and GMADA have been issued advisory notice to achieve the prescribed standards.
Patiala (13 MLD)	FAB	Not meeting with F.Coli	Action under the provisions of Water Act, 1974 is being initiated.

3.4.1.13 Inspection of industries by District Level Special Task Force during the period September to October, 2019 and the action taken against defaulting industries.

S. No.	Number of industrial units inspected by DLSTF	Action taken, if any
1.	DLSTF, Patiala visited 4 industries on 19.9.2019	None of the industry was found discharging wastewater into river Ghaggar.
2.	DLSTF, Sangrur visited Balia and Sirhind Choe on 4.9.2019 and flexible pipe along the boundary of Gahir Paper Mills Ltd., Sunam, but no discharge of wastewater was found. However, upon surprise inspection on 19.9.2019, the industry was found discharging small quantity of wastewater through flexible pipe into Sirhind choe.	Notice under the Water Act, 1974 along with an opportunity of personal hearing was held on 9.12.2019.

3.4.1.14 Status of installation of STPs for the villages.

There are 389 villages which are discharging their wastewater directly/ indirectly into River Ghaggar. The revised Action Plan for installation of treatment system in these villages is as under:

Total no. of villages	Phase-I			Phase-II			Phase-III		
	No. of village covered	Funds required in Rs Crores	Timelines for completions	No. of village covered	Funds required in Rs Crores	Timelines for completions	No. of village covered	Funds required in Rs Crores	Timelines for completions
389	87	26.10	1/3/19 to 30/6/20	152	45.6	1/3/20 to 30/6/21	150	45	1/3/21 to 30/6/22

As per above details, out of 87 villages taken in first phase, the treatment system of 21 villages has been completed and in other 7 villages, the treatment system is in progress.

3.4.1.14.1 Status of installation of STPs in 28 villages

The Department of Rural Development & Panchayat of State of Punjab has provided STPs in 14 villages of Bhawanigarh block, 1 of suman block, 2 of Dirba block and 4 of Patran Block of District Sangrur, which have discharge varies between 18-933 KLD. In 7 villages of blocks Bhawanigarh, Sunam and Sangrur of Distt. Sangrur, STPs are under construction. The list of these 28 villages is mentioned as under:

List of 28 villages in which STPs have been completed / under construction

Sr. No.	Name of District	Name of Block	Name of villages	Discharge in KLD	Status
1.	Sangrur	Bhawanigarh	Kalajhar	141	Completed
2.	Sangrur	Bhawanigarh	Rasoolpur Chana	44	Completed
3.	Sangrur	Bhawanigarh	Santokh pura	31	Completed
4.	Sangrur	Bhawanigarh	Jalan	85	Completed
5.	Sangrur	Bhawanigarh	Jollian	74	Completed
6.	Sangrur	Bhawanigarh	Fatehgarh bhadson	96	Completed
7.	Sangrur	Bhawanigarh	Panwan	101	Completed
8.	Sangrur	Bhawanigarh	Sakroudi	142	Completed
9.	Sangrur	Bhawanigarh	Sajuma	60	Completed
10.	Sangrur	Sunam	Sheron	319	Completed
11.	Sangrur	Dirba	Sefipur Kalan	302	Completed
12.	Sangrur	Bhawanigarh	Mehsampura	76	Completed
13.	Sangrur	Bhawanigarh	Dittupur	18	Completed
14.	Sangrur	Bhawanigarh	Nandgarh	52	Completed
15.	Sangrur	Dirba	Kamalpur	226	Completed
16.	Sangrur	Bhawanigarh	Khari Chandwan	52	Work in progress
17.	Sangrur	Bhawanigarh	Munshi wala	53	Completed
18.	Sangrur	Bhawanigarh	Bharaj	66	Completed
19.	Sangrur	Bhawanigarh	Lakhewal	43	Work in progress

20.	Sangrur	Bhawanigarh	Channo	126	Work in progress
21.	Sangrur	Bhawanigarh	Gharachon	674	Work in progress
22.	Sangrur	Sunam	Satoj	229	Work in progress
23.	Sangrur	Sunam	Dharam garh	118	Work in progress
24.	Sangrur	Sangrur	Changal	156	Work in progress
25.	Patiala	Patran	Baras	933	Completed
26.	Patiala	Patran	Chunagran	690	Completed
27.	Patiala	Patran	Harlau Khurd	446	Completed
28.	Patiala	Patran	Hamjheri	831	Completed

3.4.1.15 Status of Health check up camps organized during the month November, 2019

Name of the District	No. of Health camps organized	No. of patient checked	No. of patient found suffered from water borne diseases
Patiala	4	811	10 patients were diagnosed with mild water borne diseases.
SAS Nagar	Nil	Nil	Nil
Sangrur	4	164	5 affected from scabies
Mansa	3	62	Nil
Total	**11**	**1037**	15

The above data indicate that out of 1037 patients checked during health check up camps, 15 patients were found suffered with water borne diseases.

3.1.4.1.16 Information, Education & Communication (IEC) activities

The IEC activities performed by Regional Offices of the Punjab Pollution Control Board in the catchment area of river Ghaggar are as under.

S. No.	Name of the Regional Office of PPCB	Date on which camp was organized for IEC activities	Activities performed
1.	SAS Nagar	15.10.2019	A meeting was held with the representatives of meat plants and they were made aware about the management and handling of liquid as well as solid waste. They were also guided about the operating parameters to be maintained for effective operation of ETP.
		13.11.2019	The industries were guided as to how the OCEMS data is to be maintained and calibration of the same.

		3.12.2019	A meeting was held with the representative of the industries of Focal Point Dera Bassi and they were guided as to how the compliance of Environment Acts is to be ensured and their obligation under the act.
2.	Patiala	28.9.2019 and 29.11.2019	Camps of health care establishment were held to aware the occupiers about the segregation and disposal of Bio-medical waste.
		9.9.2019	A camp was held with the E-waste generators and they were guided about their obligations under the E-waste Management Rules, 2016.
3.	Sangrur	29.11.2019	A camp was held with the E-waste generators and they were guided about their obligations under the E-waste Management Rules, 2016.
4.	Bathinda	28.9.2019, 17.10.2019, 29.11.2019 and 12.12.2019	A camp was held with the E-waste generators and they were guided about their obligations under the E-waste Management Rules, 2016.

3.4.1.17 Environmental Flow

There is a need to maintain the environmental flow in the river as per norms and quantity of the flow of water at any point of its cross section. The quality of water in a river can be maintained / restored by adopting the following mechanism. The Executive Committee recommends that the following directions be given to the departments of State of Punjab.

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

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

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

iv. The Deptt. of Water Resources may explore the possibility of release of water from nearby canal to maintain the quality of the River.

v. PPCB shall install on line River Water Quality Monitoring Stations (RWQMS) at appropriate location by 30.06.2020

3.4.1.18 Septage and Faecal Sludge management

With the development and increase in population in the rural areas and unauthorized localities in urban area, the Government of India launched a Swatch Bharat Programme. Every household in the rural area has been provided with pit latrine facility or providing septic tanks. It seeks to improve the levels of cleanliness in rural areas through Solid and Liquid waste Management activities and making villages Open Defecation Free (ODF), clean and sanitised.

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

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

3.4.1.19 Removal of solid waste from river Ghaggar and drains/Nallah falling into it.

The Executive Committee recommends that PPCB and department of water resources (drainage) shall jointly survey river Ghaggar and its tributaries and identify the stretches, where the solid waste is found dumped. The survey may be completed by 31.03.2020 and action to lift these solid wastes may be taken by the departments responsible for this task by 30.05.2020.

3.4.2 State of Himachal Pradesh

3.4.2.1 Performance of existing STPs

Parwanoo and Kala Amb area fall in the catchment area of Sukhna Nallah and Markanda River, respectively, further leading to River Ghaggar. The status is as under:

3.4.2.1.1 Parwanoo area

- Parwanoo does not have any STP at present.

- 1st pilot STP of capacity 70 KLD, installed by HIMUDA in Sector-5, Parwanoo, is in operation and is meeting with the prescribed norms.
- 2nd pilot STP of capacity 70 KLD is near to completion at Village Khadeen.

3.4.2.1.2 Kala Amb Area

Presently, no STP exists in Kala Amb area. However, one CETP-cum-STP of capacity 5 MLD has been proposed to be installed in Kala Amb area.

3.4.2.2 Installation of New STPs

3.4.2.2.1 Parwanoo area

2 STPs, each of capacity 1 MLD, have been proposed to be installed in Parwanoo area. These are likely to be completed by 31.12.2020.

3.4.2.2.2 Kala Amb area

- One CETP-cum-STP of capacity 5 MLD has been proposed for Kala Amb area. The same is likely to be completed by 31.12.2020.
- One STP of capacity 1.5 MLD is proposed for Trilokpur area and same is likely to be completed by 31.12.2020.

3.4.2.3 Status of utilization of treated sewage of the towns for irrigation.

- Department of Irrigation and Public Health have submitted that it is difficult to utilize treated sewage for flushing, construction activity, irrigation etc due to topography of the area.
- Both the departments have agreed to explore on pilot basis to check the feasibility of reutilization of treated sewage in hilly areas.
- Most of the water polluting industries are using treated effluent from their STPs/ETPs in gardening, flushing etc.

3.4.2.4 Inspection of industries/ STPs by HPPCB and action taken against the violating industries / operating agencies of STPs.

3.4.2.4.1 Parwanoo area:

- Total 101 industries were inspected during October 2019 to December 2019, the period under reporting.
- 29 effluent samples from ETPs and 1 sample from bore well of different industries were collected. Show cause notices have been issued under the provisions of Water Act, 1974 to the non complying industries.

3.4.2.4.2 Kala Amb area:

- 53 industries were inspected from October 2019 to December 2019.

- 19 effluent samples from ETPs of different industries and 1 sample from bore well were collected.
- Non complying units (7) are being issued show cause notices. 1 unit which was persistently violating the norms has been issued directions for disconnection of electric connection under section 33-A of Water (Prevention and control of Pollution) Act, 1974.
- Environmental Compensation amounting to Rs. 3.25 lakhs has been imposed upon 3 defaulting units for violation of environmental norms besides disconnection of power for one industry.

3.4.2.5 Inspection of industries/ STPs by District Level Special Task Force and action taken against the violating industries/ operating agencies of STPs.

3.4.2.5.1 Parwanoo area

- 07 industries were inspected by District Level STF in Parwanoo area from October, 2019 to December, 15, 2019. Action against the violating industries is under process.

3.4.2.5.2 Markanda Catchment:

- 2 industries were inspected by District Level STF in Kala Amb area falling in the catchment area of Markanda River on 12-12-2019. The effluent samples of both the industries were collected and sent to HPPCB Regional Laboratory, Poanta Sahib for analysis. The analysis results are awaited.

3.4.2.6 Water quality of river Ghaggar at various points at the entry and exit points of sewage disposal systems

Himachal Pradesh Pollution Control Board is monitoring the water quality of SukhnaNallah, Kaushalya River and Markanda River on monthly basis and water quality of Nallah / rivers is mentioned as under:

3.4.2.6.1 Sukhna Nallah

The Water Quality of Sukhna Nallah has been found improved in the last three months. Water samples of Sukhna Nallah and Kaushalya River were collected during the period May, 2019 to November 2019 and the analysis results are mentioned under:

Sukhna Nallah at Kalka Barrier, Parwanoo

Month/ Year	pH	D.O. mg/l	COD mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
Apr, 2019	7.42	5.0	248.0	58.0	920	>1600
May, 2019	7.92	4.2	120.0	25.0	220	920
Jun, 2019	7.93	2.50	104.00	32.00	240	540

Sep, 2019	7.51	5.90	24.00	2.2	94	170
Oct, 2019	7.29	5.20	--	2.4	32	120
Nov, 2019	7.15	6.9	24	1.8	26	94

The analysis results indicate that there is improvement w.r.t. parameters DO, BOD & F.Coli for the period September 2019 to November 2019 as compared to the analysis results for the period April, 2019 to June 2019.

3.4.2.6.2 Kaushalya River

Month/Year	pH	D.O. mg/l	COD mg/l	BOD mg/l	F.C. MPN /100ml	T.C. MPN /100ml
March, 2019	8.02	9.5	12.0	1.2	6.1	10.0
April, 2019	7.23	8.0	8.0	1.0	11.0	22.0
Aug, 2019	7.5	7.1	24.0	2.2	13.0	58.0
Nov, 2019	8.17	6.3	4.0	0.2	14.0	32.0

The analysis results indicate that there is improvement w.r.t. BOD and T.Coli parameters in the analysis results for the period November, 2019 as compared to the analysis results of August, 2019.

3.4.2.6.3 Markanda river

HPPCB is regularly monitoring the water quality of River Markanda u/s of Jattan Wala Drain, Jattan Walla Drain a driver Markanda at d/s of Jattan Wala Nallah on monthly basis. The analysis results are mentioned as under:

River Markanada u/s Jattanwala drain

Name of Location	Period	pH	DO (mg/L)	BOD (mg/L)	FC (MPN /100ml)	TC (MPN/100 ml)
River Markanda U/s Jattanwala Drain	May, 2019	7.47	6.7	0.9	49	170
	June, 2019	Source was found dry				
	July, 2019	7.88	6.5	0.8	43	79
	August, 2019	7.42	6.5	0.7	46	210
	September, 2019	7.87	6.6	0.6	47	220
	October, 2019	7.98	8.6	0.9	22	49
	November, 2019	7.54	9.1	0.7	21	43

Jattanwala Drain

Name of Location	Period	pH	DO (mg/l)	BOD (mg/l)	FC (MPN/100ml)	TC (MPN/100 ml)
Jattan Wala Drain	May, 2019	7.5	0.3	20	108000	320000
	June, 2019	7.62	0.8	18	70,000	1,84,000
	July, 2019	7.24	0	45	72,000	1,80,000
	August, 2019	7.4	2	18	17000	43000
	September, 2019	7.47	1.1	35	22000	54000
	October, 2019	7.92	0.5	32	14000	35000
	November, 2019	7.19	1.0	65	70000	184000

River Markanda d/s Jattanwala drain

Name of Location	Period	pH	DO (mg/l)	BOD (mg/l)	FC (MPN/100ml)	TC (MPN/100 ml)
River Markanda D/s Jattanwala Drain	May, 2019	Source was found dry				
	June, 2019	Source was found dry				
	July, 2019	Source was found dry				
	August, 2019	7.65	6.7	1.2	58	280
	September, 2019	7.46	5.5	1.8	58	350
	October, 2019	7.4	7.5	2	79	350
	November, 2019	7.27	5.0	8.0	11000	35000

The analysis results of River Markanda at d/s of Jattan Wala drain indicate that the water quality of River Markanda has been degraded in the month of November, 2019 w.r.t parameters namely F.Coli and T.Coli due to discharge of untreated sewage of Kala Amb area.

3.4.2.7 Groundwater quality along the catchment area of river Ghaggar falling in the jurisdiction of Himachal Pradesh.

Ground water samples have been collected from the area located along Sukhna Nallah.No contamination of ground water has been observed as per the lab analysis results available till date.

3.4.2.8 Installation of OCEMS and CCTV cameras on ETP by the industries and STPs by the Department Local Government / any other responsible agencies.

3.4.2.8.1 Parwanoo area

Presently, there is no industry, which fall under 17 categories of highly polluting industries in the catchment of Sukhna Nallah. However, 04 red category industries have been converted into Zero Liquid Discharge (ZLD) by installing evaporators at the outlet of ETPs.

3.4.2.8.2 Kala Amb area

Presently, a pulp and paper mill, falling under 17 categories of Industries, has installed OCEMS at the outlet of its ETP and data is sent to the HPPCB. However, no CCTV camera has been installed on ETP by the industry so far.

3.4.2.9 Status of Health Checkup Camps in the catchment area of river Ghaggar near Parwanoo.

3.4.2.9.1 Sukhna Nallah catchment:

Health check-up camps are being organized by Department of Health & Family Welfare on monthly basis in Parwanoo area. 11 such camps have been organized by department of Health and Family welfare so far in Parwanoo area.

3.4.2.9.2 Markanda Catchment:

- Health camps are being organized by Department of Health & Family Welfare. 13 multi-specialty health camps have been organized so far.
- Health camp for the month of November was organized on 14.11.2019 in Village Johron, Kala Amb in which 130 patients were examined.
- Health camp for the month of December, 2019 was organized on 17.12.2019 at Village Mogin and Kala Amb in which 157 patients were examined.

3.4.2.10 Status of installation of STPs for treatment of sewage/ sullage of villages.

3.4.2.10.1 Parwanoo area falling in the catchment area of Sukhna Nallah

02 STPs each of capacity 1 MLD have been proposed at Parwanoo for the treatment of sewage of Parwanoo area. The adjoining Panchayat/village areas shall also be connected to these STPs.

3.4.2.10.2 Kala Amb area falling in the catchment area of Markanda River

- For treatment of sewage of village Khairi and Trilokpur, a Budget provision of Rs. One crore has been made. Additionally, a budget provision of Rs 2.5 crores has also been made on 17.09.2019.
- Similarly, for installation of STPs for the treatment of sewage of Kala Amb and Maginand area, budget provision of Rs 3.0 crores has been made on 17.09.2019.

3.4.2.11 Compliance report on the directions given/recommendations made by the Executive Committee during its 15th Meeting held with the State Level Officers held on 31.10.2019.

Sr. No.	Activities	Action taken report	
		Parwanoo area falling in Sukhna Nallah catchment area	**Kala Amb area falling in Markanda River catchment area**
1.	2 STPs each of capacity 1 MLD shall be installed by 31.3.2021 in Parwanoo area	As per the direction of Hon'ble NGT, these STPs shall be installed by 31.12.2020.	--
2.	1 CETP cum STP of capacity 5 MLD shall be installed by 31.3.2021 in Kala Amb area.	--	For installation of 1CETP cum STP of capacity 5MLD, immediate steps shall be taken to get Environmental clearance from MOEFF&CC by SPV as required under EIA notification dated 14.9.2006. CETP cum STP shall be commissioned by 31.12.2020.

3.	HPPCB shall inspect the water polluting industries falling in catchment area of Sukhna Nallah, Jattan Wala Nallah, River Markanda on monthly basis.	03 rounds of sampling have already been completed. Directions for closure of 20 industries have been issued under Water Act, 1974 and Environmental Compensation amounting to Rs. 4.75 lakhs has been imposed.	In the month of November, 2019, 53 industries were inspected. 19 Effluent samples from ETPs and 1 sample from bore wells of different industries were collected. 7 nos of non complying units are being issued with Show Cause Notice and one no unit persistently violating the norms being recommended to Head Office for Power disconnection under section 33-A of Water Act, 1974.
4.	The State of Himachal Pradesh shall prepare Action plan for utilization of treated sewage of the town Parwanoo and Kala Amb area for Irrigation by 31.12.2019 and funds for the same shall be arranged	The I&PH has submitted that due to topography of the area, it is difficult to utilize treated sewage for flushing, construction activity, irrigation etc. However, Department of I&PH has agreed to explore on pilot basis to check the feasibility of reutilization of treated sewage in hilly areas. Also, most of the water polluting industries are using treated effluent from their STPs/ETPs in gardening, flushing etc.	The I & PH has submitted that due to topography of the area, it is difficult to utilize treated sewage for irrigation. However, Department of I&PH has agreed to explore the feasibility by identifying areas in co-ordination with Agriculture Deptt. for utilization of treated sewage for irrigation purposes.
5.	HPPCB shall continue to analyse groundwater samples from different locations along the catchment area of Sukhna Nallah, Markanda River and Jattan Wala Nallah.	No contamination of ground water has been observed as per the lab analysis results available till date	In the month of October and November 2019, 8 ground water samples were collected. Analysis Results of all the samples are within prescribed norms
6.	Deptt. of Health & Family Welfare shall regularly conduct Health Check up Camps in the towns/ villages located in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah	2 such camps have been organized so far in Parwanoo area	Health camp for the month of November was organized on 14.11.2019 in Village Johron, Kala Amb in which 130 patients were examined and health camp for the month of December, 2019 was organized on 17.12.2019 at Village Moginand, Kala Amb in which 157 patients were examined.
7.	District Level Special Task Force of the concerned districts should visit the industries and other water polluting sources on monthly basis and action may be reomended to HPPCB against the violating industries /	7 such inspections have been carried out by DLSTF in November, 2019	02 effluent samples of water polluting industries were taken on 12.12.2019 which were sent to HPSPCB Regional Laboratory, Paonta Sahib for the analysis and the results are awaited

	culprits under intimation to Executive Committee		
8.	HPPCB shall identify the pollution sources contributing high value of BOD (85 and 100mg/l) and F.coli (1600 and 16000MPN/100ml) in Sector -4 Nallah before confluence with Sukhna Nallah within 7 days as observed during the monitoring carried out from April 2019 to Sep,2019 and take immediate steps to get install water pollution control measures from the responsible agencies	Due to leakage from a septic tank in Sector-4, high BOD values of (85 and 100 mg/l) and F. Coli (1600 and 16,000 MPN/100 ml) were observed in Secotr-4 Nallah before confluence to Sukhna Nallah during the monitoring carried out from April 2019 to Sep. 2019. The leakage has now been repaired and all the septic tanks have been cleaned.	--
9.	HPPCB shall continue to monitor the water quality of Sukhna Nallah, River Markanda and Jattan Wala Nallah and River Kaushalya at different locations as already earmarked and data may be analyzed.	Regular monitoring and sampling of Sukhna Nallah and Kaushalya River is being carried out by HPSPCB on monthly basis. Results are complying with the Class-B water quality criteria.	HPPCB is regularly monitoring the water quality of River Markanda upstream Jattan Walla Drain, River Markanda downstream Jattan Walla Drain and Jattan Walla Drain on monthly basis

3.4.2.12 Environmental Flow

The following steps have been taken to maintain environmental flow in the river/ Nallah

i. The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, have been installed in river Markanda near Vill Ogli, Kala Amb town. The system is being run on trial basis and calibration is being done.

ii. The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, has been installed in river Kaushalya near village Kamli. The parameters DO, BOD, TSS, pH, Temp and flow rate are being monitored and results of the same are being displayed at State Board server on real time basis.

3.4.2.13 Septage and Faecal Sludge management

i. HPPCB has informed that necessary directions have been issued to MC Parwanoo & BDO Dharampur to ensure that septage and fecal sludge is managed in a scientific manner.

ii. HPPCB has reported that show cause notice to the local authorities i.e. Member Secretary, SADA and Project Officer DRDA is being issued for higher values of BOD, T. Coli and F. Coli in Jattanwala Drain leading to Markanda River and further leading to river Ghaggar.

3.4.2.14 Solid Waste Management in the catchment area of Nallah/drain/river

3.4.2.14.1 Sukhna Nallah

03 No. of cleanliness drives were carried out in October, 2019 and 04 No. in November, 2019.

- 1st cleanliness drive in Sukhna Nallah was organized on 02nd Oct, 2019 by HPPCB along with MC Parwanoo and PIA in the catchment of Sukhna Nallah and more than 10 MT of solid waste was collected.
- 2nd cleanliness drive in the Sukhna Nallah was organised on 19th Oct 2019 by the HPPCB along with Forest Deptt, HPMC staff and MC Parwanoo, wherein, the solid waste dumping area near Village Ambota was cleared. The photographs of cleanliness drive are shown as under:-

Photographs showing cleanliness drive to remove solid waste from the drain

- HPSPCB also organized 04 no of cleanliness drives in the area in Parwanoo area in November, 2019 and the solid waste from drains / road was removed. Similarly other industries have been motivated to adopt the area surrounding them for keeping clean and green. Photographs showing the cleanliness are mentioned as under:

Photographs showing the cleanliness in Sukhna Nallah at Parwanoo

3.4.2.14.2 Markanda River

- Cleanliness drives were organized on 2 October, 2019 and 19 October, 2019 under "Swachhata Hi Seva" campaign in which around 5 MT of Waste was collected and disposed off to the Solid Waste Management Sites of MC Nahan and MC Paonta in Sirmaur District. Photographs showing the lifting of solid waste from the drain are mentioned as under:

Cleanliness Drive in Kala Amb area on 02 October, 2019

Cleanliness drive at Paonta Sahib on 02 October,2019

Cleanliness Drive along Jattanwala Drain on 19 October, 2019

3.4.2.15 Creating awareness through Information, Education and Communication (IEC)

3.4.2.15.1 Sukhna Nallah:

- Workshop on Comprehensive Environment Pollution Index (CEPI) was held for various industries in Parwanoo area under the chairmanship of Member Secretary, HPSPCB Shimla on 21.11.2019.
- Awareness program cum stakeholder workshop was held with the staff of Microtek Group regarding compliance of Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, Environment Protection Act, 1986, Solid Waste Management Rules, 2016, Hazardous Waste Rules, 2016, Batteries Waste Rules, 2001, E-Waste Rules, 2016, Noise Rules, 2000 and Plastic Waste Management Rules, 2016.

3.4.2.15.2 Markanda River:

HPSPCB is continuously carrying out mass awareness activities in Kala Amb area. A meeting on 19th November, 2019 was held under the chairmanship of Member Secretary, HPSPCB with all the stakeholders in Kala Amb area to apprise them about pollution control norms to be achieved by them.

3.4.2.16 Watershed Management

3.4.2.16.1 Sukhna Nallah Catchment

All the industries and Govt. institutions are being encouraged to harvest the rain water and reuse it in toilet flushing.

3.4.2.16.2 Markanda Catchment

- Workshop regarding Jal Shakti Abhiyan and Roof Top Harvesting at Common Facility Centre in Kala Amb Industrial Area was held on 01.10.2019.
- 3 industries namely M/s Akhil Enterprises, M/s Himsagar Labs Pvt Ltd, M/s Ruchira Printing and Packaging have agreed to connect their roof top drains with the dried borewells of IPH nearby their units.

3.4.3 U.T Chandigarh

3.4.3.1. Performance of 6 existing STPs.

i) RAIPUR KHURD STP OUTLET (Capacity 1.25 MGD)

BOD (mg/l)				TSS (mg/l)				Fecal Coliform (MPN/100ml)			
May	Jun	Oct	Nov	May	Jun	Oct	Nov	May	Jun	Oct	Nov
91	86	82	87	65	20	69	57	4.9×10^5	7.9×10^4	4×10^6	4.9×10^4

Above data indicate that there is improvement w.r.t TSS and BOD parameters. No improvement w.r.t fecal Coliform parameter has been observed.

ii) 3 BRD STP (Capacity 11 MGD)

BOD (mg/l)				TSS (mg/l)				Fecal Coliform (MPN/100ml)			
May	Jun	Oct	Nov	May	Jun	Oct	Nov	May	Jun	Oct	Nov
8	12	29	24	10	23	30	42	--	1.3×10^3	80×10^3	1.3×10^6

The data indicate that though the values of parameters w.r.t BOD and TSS are within prescribed norms BOD: 30 mg/l and TSS: 100 mg/l but the performance of STP has been degraded. No improvement w.r.t F. Coli parameter has been observed.

iii) RAIPUR KALAN STP OUTLET (Capacity 5 MGD)

BOD (mg/l)				TSS (mg/l)				Fecal Coliform (MPN/100ml)			
May	Jun	Oct	Nov	May	Jun	Oct	Nov	May	Jun	Oct	Nov
81	80	55	59	25	11	20	28	4.9×10^5	4.9×10^4	4.0×10^6	3.3×10^5

As per data mentioned above, there is improvement w.r.t BOD parameter. The value of TSS is within the norms. No improvement w.r.t F. Coli parameter has been observed.

iv) DHANAS STP OUTLET (Capacity 1.67 MGD)

BOD (mg/l)				TSS (mg/l)				Fecal Coliform (MPN/100ml)			
May	Jun	Oct	Nov	May	Jun	Oct	Nov	May	Jun	Oct	Nov
3	8	18	17	6	7	24	16	--	1.20×10^4	1.7×10^6	2.6×10^6

The above data indicate that though the values of BOD and TSS are within the prescribed norms of BOD: 30 mg/l, TSS: 100 mg/l but the performance of STP has been degraded. There is no improvement w.r.t F. Coli parameter.

v) MALOYA STP (Capacity 5 MGD started operation in the month of July 2019)

BOD (mg/l)				TSS (mg/l)				Fecal Coliform (MPN/100ml)			
May	Jun	Oct	Nov	May	Jun	Oct	Nov	May	Jun	Oct	Nov
--	--	10	27	--	--	21	25	--	--	2.0×10^5	1.09×10^7

As per data mentioned in table given above, the values of BOD and TSS are within the prescribed norms. No improvement w.r.t F. Coli parameter has been observed.

vi) STP DIGGIAN OUTLET (Capacity 30 MGD)

BOD (mg/l)				TSS (mg/l)				Fecal Coliform (MPN/100ml)			
May	Jun	Oct	Nov	May	Jun	Oct	Nov	May	Jun	Oct	Nov
41	29	22	38	34	30	10	35	3.3×10^5	2.40×10^5	24×10^5	4.9×10^6

The above data indicate that the value of BOD in the month of June and October, 2019 and TSS for all the 4 months are within the prescribed norms of BOD: 30 mg/l and TSS: 100 mg/l. No improvement has been observed w.r.t F. Coli parameter.

3.4.3.2 Installation of new STPs

Sr. No.	Location of STPs	Capacity	Status
1	Kishangarh area near Sukhna Lake	2 MLD	Under tendering process

Recommendations:

Municipal Corporation Chandigarh shall ensure that STP may be completed by 31.12.2020

3.4.3.3 Upgradation of existing STPs to achieve the stringent norms as per the directions of Hon'ble NGT

For upgradation of existing STPs to meet the latest prescribed standards, the tenders of upgradation stands opened and technical evaluation is under process. The work is likely to be completed by 30.04.2022 as reported by CPCC.

Recommendations:

The Executive Committee recommends that upgradation work of existing STPs to meet within the stringent norms maybe completed by 31.12.2020.

3.4.3.4 Status of utilization of treated sewage of the towns for irrigation

In Chandigarh area, there is no adjoining agriculture fields, where the treated sewage may be utilized for irrigation purposes. However, the treated Sewage is being used for watering of various gardens/parks and golf course and even treated water is also supplied to houses for gardening purposes.

Recommendations

The Executive Committee recommends that once the upgradation in the existing STPs is made, the maximum quantity of treated sewage may be utilized for construction, gardening and other useful purposes.

3.4.3.5 Inspection of industries/STPs by CPCC and action taken against the violating industries/operating agencies of STPs

Month of inspection	Inspected unit (In no.)	Non-complying (In no.)	Action taken
Oct, 2019	12	3	Show cause notices were issued to 3 units.
Nov, 2019	20	12	Show cause notices were issued to 12 units

3.4.3.6 Inspection of industries/STPs by District level task force and action taken against the violating industries/operating agencies of STPs.

No inspection has been done by District Level Special Task Force in the reporting period from 01.10.19 to 15.12.19.

3.4.3.7 Water quality of river Ghaggar at various points for the period May, June and September, 2019 and October, November and mid of December, 2019 and comparison of data.

S.N.	Parameters	Unit	May	June	Sept	Oct	Nov	Dec
1	Temp	°C	27	27	29	24	23.5	19
2	pH	--	7.6	7.7	8.1	7.9	6.8	8.0
3	Conductivity	µs/cm	729	754	498	470	571	523
4	DO	mg/l	4.9	4.0	5.3	6.6	6.8	--
5	COD	mg/l	107	167	55	58	87	32
6	BOD	mg/l	28	29	9	9	12	7
7	NH_3-N	mg/l	15	18	0.99	2.80	1.66	2.26
8	Phosphate	mg/l	1.79	1.66	0.20	0.48	0.50	0.38
9	TSS	mg/l	1094	2053	206	383	186	111
10	Boron(B)	mg/l	0.04	0.04	0.04	BDL	BDL	BDL
11	Total Coliform	MPN/100 ml	1.41×10^6	3.48×10^5	3.48×10^4	1.75×10^4	5.42×10^4	Result awaited
12	F. Coliform	MPN/100 ml	9.5×10^5	1.09×10^5	1.72×10^6	1.09×10^4	2.3×10^3	

The above data indicate that there is improvement in the quality of river Ghaggar water w.r.t DO, BOD, COD and TSS parameter and but no improvement w.r.t F. Coli parameter.

3.4.3.8 Groundwater quality along the catchment area of river Ghaggar carried out in the month July and October, 2019

3.4.3.8.1 Ground water quality of Dadumajra, Sector 22-24, Chandigarh and Village Palsora.

S. N.	Parameters	Desirable Limit	Units	Dadu Majra		SEC-15/Near Dumping ground		SEC-22/Sec 24		VILL PALSORA	
				Jul	Oct	Jul	Oct	Jul	Oct	Jul	Oct
1	Temp.	--	^{0}C	24	24	24.5	24	24	24.5	24	24
2	pH	6.5-8.5	--	7.4	7.2	7.5	7.4	7.4	7.2	7.5	7.4
3	Conductivity	--	µs/cm	841	842	879	759	631	639	987	1156
4	BOD	--	mg/l	1.7	1.6	1.4	2.2	1.2	2.1	1	1.4
5	COD	--	mg/l	30	11	19	20	21	15	18	25
6	NO_3-N	50	mg/l	--	0.5	--	4.2	--	1.9	--	--
7	NH_3-N	--	mg/l	BDL	BDL	0.1	0.11	0.3	0.20	0.3	0.30
8	Turbidity	5	NTU	4.1	4	12.3	8	5.0	6	11.9	10
9	P-alk	--	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
10	T-alk	200	mg/l	274	302	316	280	270	268	372	406
11	Hardness as $CaCO_3$	300	mg/l	294.0	288	216	214	258	212	310	218
12	Ca as $CaCO_3$	75	mg/l	164.0	156	114	122	156	108	244	124
13	Mg as $CaCO_3$	30	mg/l	130.0	132	102	92	102	104	66	94
14	Sulphate	200	mg/l	54	47	63	43	45	49	69	51
15	TDS	500	mg/l	534	482	502	416	366	354	484	634
16	TFS	--	mg/l	396.0	432	436	356	312	296	444	568
17	TSS	--	mg/l	5.0	5	6	7	4	5	6.0	5
18	Fluoride	1	mg/l	0.6	0.82	0.2	0.32	0.2	0.39	0.3	0.50
19	Chloride	250	mg/l	57	48	50	35	9	12	59	84
20	Phosphate	--	mg/l	0.07	0.02	0.07	0.02	0.06	0.02	0.11	0.07
21	Colour	--		<5	<5	10	10	<5	<5	5.0	5.0
22	Boron	--	mg/l	BDL	--	BDL	BDL	BDL	BDL	BDL	BDL
23	TKN	--	mg/l	--	BDL	--	BDL	--	BDL	--	--
24	Sodium	--	mg/l	--	65	--	53	--	32	--	--
25	potassium	--	mg/l	--	1.34	--	2.5	--	2	--	--
26	Fecal Coliform	--	MPN/100ml	--	$1.09x10^4$	--	<1	--	<1	--	--
27	Total Coliform	--	MPN/100ml	--	$7.0x10^3$	--	<1	--	<1	--	--

The ground water quality data, as mentioned above, indicate that all the parameters are within the prescribed norms except calcium and magnesium, which may be due to geogenic reasons.

3.4.3.8.2. Groundwater quality of Dhanas, Sector 35 and Sector 20, Chandigarh

S. N	Parameters	Desirable Limit	Units	DHANAS		Sec -35		Sec -20	
				Jul	Oct	July	Oct	July	Oct
1	Temp.	--	^{0}C	25	24	24	25	24.0	24.5

2	pH	6.5 to 8.5	--	7.4	7.2	7.3	7.2	7.2	7.1
3	Conductivity	--	µs/cm	744	635	1172	1009	689	751
4	BOD	--	mg/l	<1	<1	1.9	1.2	1.9	2.0
5	COD	--	mg/l	17.3	7	21	35	29	20
6	NO3-N	50	mg/l	--	3.9	--	8.9	--	4.3
7	NH3-N	--	mg/l	0.3	0.32	0.3	BDL	BDL	BDL
8	Turbidity	5	NTU	37	3	2.8	3	3.1	3
9	P-alk	--	mg/l	NIL	NIL	NIL	NIL	NIL	NIL
10	T-alk	200	mg/l	322	284	--	346	260	
11	Hardness as CaCO3	300	mg/l	160	260	466	362	288	298
12	Ca as CaCO3	75	mg/l	80	150	280	220	160	160
13	Mg as CaCO3	30	mg/l	80	110	186	142	128	138
14	Sulphate	200	mg/l	16	14	49	47	52	51
15	TDS	500	mg/l	418	356	692	730	402	418
16	TFS	--	mg/l	396	364	536	478	316	362
17	TSS	--	mg/l	15	6	8	4	6	6
18	Fluoride	1	mg/l	0.1	0.37	0.2	0.40	0.8	0.85
19	Chloride	250	mg/l	27	15	76	50	30	30
20	Phosphate	--	mg/l	0.06	0.04	0.06	0.02	0.1	0.04
21	Colour			5	5	<5	<5	<5	<5
22	Boron		mg/l	BDL	BDL	BDL	BDL	BDL	BDL
23	TKN		mg/l	--	BDL	--	9.9	--	5.2
24	Sodium		mg/l	--		--	42	--	58
25	Potassium		mg/l	--	2.2	--	1.76	--	0.67
26	Faecal Coliform	--	MPN/100ml	--	<1	--	<1	--	<1
27	Total Coliform	--	MPN/100ml	--	<1	--	<1	--	<1

The ground water quality data, as mentioned above, indicate that all the parameters are within the prescribed norms except calcium and magnesium, which may be due to geogenic reasons.

3.4.3.9 Installation of OCEMS and CCTV cameras on ETP by the industries and STPs by the Municipal Corporation, Chandigarh from 1.10.2019 to 15.12.2019

As per MC, Chandigarh, CCTV cameras shall be installed by 31.3.2020 on all the STPs and it shall be ensured that data is transmitted online to all the concerned departments.

Recommendations

The Executive Committee recommends that CCTVs Cameras and OCEMSon all the existing 6 STPs may be installed by 31.3.2020 by M.C., Chandigarh and CPCC shall ensure to get install CCTV cameras and OCEMS for the industries as per criteria prescribed by the Board.

3.4.3.10 Status of health check up camps in the catchment area of River Ghaggar

S.N.	Month	Status of health camp
1.	November, 2019	Health Check up camp was organized at civil dispensary, Kajheri on 6.11.2019.

3.4.3.11 Closing of outlets into Sukhna Choe and N-Choe further leading to river Ghaggar

3.4.3.11.1 Sukhna Choe

S. No.	Location of outlet	Latest Statusw.r.t closing of outlets as on 15.12.2019
1	Kishangarh Outlet	Sewage diverted to main sewer line. **Now, there is no discharge.**
2	Outlet of Village Kishangarh inside Forest Nursery	
3	Outlet of Shastri nagar	Sewage is diverted **now, there is no discharge.**
4	First Outlet of Bapu Dham near bridge on the road connecting IT Park with Sector 26, Chd.	There is still discharge of wastewater.
5	Second Outlet of Bapu Dham Colony near Madarasi Colony	Earlier, plugged but, again sewage is being discharged.
6	Outlet from back of Gaushala, Industrial Area Ph-I, Chd. (Inside Forest Area)	Wastewater is being discharged.
7	Outlet Behind back wall of Gaushala, Ind. Area Ph-I, Chd.	Wastewater is diverted to sewer line. Now, there is no discharge from this outlet.
8	Backside of CTU, Ind. Area Ph-I (Inside Forest Area)	Plugged
9	Outlet from Ind. Area Side (Inside Forest Area)	Plugged
10	Colony No. 4, Ind. Area Ph-I, Chd.	Sump has been constructed and now sewage is being diverted to main sewer line.
11	Pump House Operated by MC Chd. Behind Central Poultry development Organization, Ind. Area, Ph-I, chd.	Now, there is no discharge, Standby motor is in place in case of any technical fault.
12	Outlet of Village Hallomajra	Sewage has been diverted Now, there is no discharge
13	Village Daria	Plugged

The above data indicate that out of total 13 outlets falling into Sukhna Choe, 9 outlets have been plugged/ diverted to sewerage system and remaining 4 outlets shall be closed by 31.01.2020.

3.4.3.11.2 N-Choe

S. No.	Location of outlet	Latest status on 15.12.2019
1.	Bougainvillea Garden	Plugged
2.	Leisure Valley	Plugged
3.	Near red Cross (Madhya Marg)	Still there is small fresh water discharge
4.	Rose Garden	Plugged
5.	Shanti Kunj	Plugged
6.	Sec. 23 near B.D. Hospital (Neuro Psychiatry)	Plugged
7.	Sec. 23 Traffic Park	Plugged

8.	Sec. 23 End Point	Plugged
9.	Sec. 36 near CFSL from Iskon Temple Site	Still there is small fresh water discharge
10.	MCM DAV College	Plugged
11.	Attawa	Plugged
12.	Bridge Point Sec. 42 from Beant Memorial site	Plugged
13.	Bridge Point Sec. 42 from Sector-42, College site	Plugged
14.	Sector -53, Opposite, Sector-42, bridge	Plugged
15.	Outlet from others colony inside garden of springs	Still there is discharge of wastewater

The above data indicate that out of total 15 outlets falling into N-Choe, 12 outlets have been plugged/ diverted to sewerage system and remaining 3 outlets shall be closed by 31.01.2020.

3.4.3.12 Compliance report of the directions given/recommendation made by the Executive Committee during its 15th meeting held with the State level officers.

Sr.no.	Directions given/recommendation made taken in the meeting held on 22.10.2019	Compliance report
1.	Press release should be made regarding inspections by DLSTF.	Will be complied with.
2.	Matter of GMCH-32 and Govt. Hospital sector 48 should be looked into, as they are running without STPs.	Notices have been issued to the hospitals.
3.	Environment compensation should be imposed on violating industries.	CPCC has started imposing Environment compensation on violating units.
4.	Standards of Primary treatment plant joining CETP should be finalized as soon as possible.	Will be finalized before establishment of CETP.
5.	Matter of Installation of new CETP in Kurali to be taken up with PPCB and Govt. of Punjab	Under process.
6.	Report submitted by Additional Chief Inspector of factories was found non-satisfactory. He was directed to submit the modified report.	Additional Chief Inspector of factories has submitted the modified report in which he informed that action has been initiated against the 11 units found not complying with the norms.
7.	Flow meter should be provided at all the STPs at by-pass channel, inlet and outlet. Opening and closing of bypass system should be done in the presence of CPCC officials.	The process of installation of flow meters at all the STPs has been started and are likely to be installed by 30.6.2020.

8.	All the STPs should maintain records w.r.t. daily electric supply consumption, sludge generation/disposal. Flow meter readings of inlet and outlet & real time monitoring should be connected with the CPCB server also.	The record w.r.t daily electric supply consumption, sludge generation/disposal is being maintained at the STPs. Consequent upon installation of flow meters, it will be ensured that the flow meter readings of inlet and outlet and real time monitoring is connected with the CPCB server.
9.	The possibilities of re-use of treated water of STPs by industries should be worked out.	Presently, out of 54 MGD of sewage generated, 10 MGD (approx.) tertiary treated sewage is being supplied for various parks, green belts and houses in Chd. After upgradation of the existing STPs, 54 MGD treated wastewater will be available for utilization.
10.	Details of SCADA system should be provided to CPCC	The scope of SCADA system has been taken in the work of upgradation of STPs to be carried out under Chd. Smart city project. This work is likely to be completed by 30.4.2022. The information will be immediately shared after installation of SCADA system.
11.	Committee members were not satisfied with the performance of STPs, which were not meeting with the standards and directed that MC may appoint NEERI or any consultant agency to find out the reasons for performance not upto the laid standards and accordingly take appropriate measures so that all the non-complying STPs meet with the prescribed norms.	MC, Chandigarh has informed that Scientists from NEERI, Nagpur visited the two non-complying STPs viz. Raipur Kalan and Raipur Khurd on 4.11.2019. Necessary drawings/flow charts stands submitted to NEERI and again the Director, NEERI has been requested to look into the matter. The work of necessary repairs will be undertaken immediately after the receipt of report from NEERI.

12.	The point sources mixing into Sukhna Choe and N-choe to find out the reasons for such high BOD and COD values should be checked.	Monitoring and testing has been conducted for each point source releasing wastewater into Sukhna and N-choe. **Analysis results of Sukha Choes** **Location** / **PARAMETERS**: **COD (mg/l)**, **BOD (mg/l)** Outlet from Hallomajra: 341, 142 Pump House Indl. Area Ph-I near central poultry farm: 260, 115 Outlet from Colony No. 4: 47, 17 Near Goshalla Indl. Area Ph-I, Chd: 384, 218 Outlet from Indl. Area (Inside Forest Area): 15, 7.6 Outlet near backside wall of CTU (Inside Forest Area): 213, 130 Madrasi Colony Sector 26: 167, 107 Bapu Dham Sec 26 First Outlet: 44, 20 **Analysis results of N-Choe** **DESCRIPTION** / **PARAMETERS**: **COD (mg/l)**, **BOD (mg/l)** Sec-16 Near Red Cross: 21, <2 Bridge Point Sec 42 From Girl College Side: 319, 157 Bridge Point Sec 42 From Beant Memorial Side: 314, 153 Sec 53 in front of Garden of Spring: 36, <1 Outlet from Adarsh Nagar inside Garden of spring: 491, 208 Sec 36 near CFSL from ISKCON Temple side: 45, 5.32 The analysis results indicate that source of waste water is domestic. However MC has been asked to find out the culprits and take action against the units discharging waste water into choes.

<table>
<tr><td>13.</td><td>Govt. hospitals wastewater, if going to terminal STP, must have primary treatment facility at hospital itself.</td><td>Process has been initiated and Govt. Hospitals have been asked to provide primary treatment facility.</td></tr>
<tr><td>14.</td><td>Action should be taken against violators who are burning garbage and intimate the committee about the action taken. Workshops should be organized for all the employees to aware them about the bad impacts of garbage/leaves burning. Press should be informed w.r.t. workshops and action taken against violators.</td><td>As per MC, action is being taken against the violators who are burning the garbage. Workshops are also being organized to aware employees and sensitize them about the bad impacts of garbage/leaves burning. Awareness through radio messages is also being made and hand holding with NGOs has also been undertaken. Media is also being apprised about the actions taken time to time.</td></tr>
<tr><td>15.</td><td>Data of drains/STPs/river should be available on public domain like website of CPCC and Chd. Admn.</td><td>CPCC website is under audit and will be launched very soon after which all the data will be available.</td></tr>
<tr><td>16.</td><td>Health department should provide the data w.r.t. the patients which have been found affected with waterborne diseases.</td><td>Health check up camps at various dispensaries were organized. No person was found affected with any ailment because of water contamination.</td></tr>
<tr><td>17</td><td>In the next meeting, Director, Health services and Director, Education should also be invited to brief the committee about the details w.r.t. discharge of waste (i.e. sanitary napkins from girl's hostels).</td><td>In the next meeting, CPCC will invite the Director, Health services and Director, Education to discuss the details regarding management of waste i.e. sanitary napkins from girls hostel.</td></tr>
<tr><td>18</td><td>Committee members directed to compare the existing data of drains with the data of previous 5 years for analysis to identify the trends.</td><td>Existing data of drains has been compared with the previous five year data to identify the trends. Analysis of the data reveals that the values of TSS and BOD (mg/l) are found to be increasing since 2015 up to 2018 and after that, in 2019, the values have been decreased .
Sukhna Choe Exit Point
<table>
<tr><th>Year</th><th>BOD(mg/l)
Avg.</th><th>TSS(mg/l)
Avg.</th></tr>
<tr><td>2015</td><td>32</td><td>66</td></tr>
<tr><td>2016</td><td>32</td><td>83</td></tr>
<tr><td>2017</td><td>76</td><td>101</td></tr>
<tr><td>2018</td><td>169</td><td>238</td></tr>
<tr><td>2019</td><td>149</td><td>176</td></tr>
</table>
N Choe Exit Point
<table>
<tr><th>Year</th><th>BOD(mg/l)
Avg.</th><th>TSS(mg/l)
Avg.</th></tr>
<tr><td>2015</td><td>34</td><td>90</td></tr>
<tr><td>2016</td><td>28</td><td>63</td></tr>
<tr><td>2017</td><td>66</td><td>84</td></tr>
<tr><td>2018</td><td>85</td><td>93</td></tr>
<tr><td>2019</td><td>94</td><td>105</td></tr>
</table></td></tr>
<tr><td>19</td><td>Workshops should be organized at the earliest for the electroplating industries to sensitize them and share the best practices to be followed.</td><td>CPCB has been requested to nominate one expert so that workshop can be organized.</td></tr>
<tr><td>20</td><td>MC, Commissioner shall give details about waste segregation and was asked to provide the timelines in the next meeting.</td><td>Waste segregation has already been started in Chandigarh.</td></tr>
</table>

21	Environment compensation of suitable amount should be imposed on the MC in case the STPs fail to achieve with the prescribed norms.	As per the order of the Hon'ble NGT dated 28.8.2019 in the matter of Paryavaran suraksha samiti, environment compensation on local bodies for non-compliance is to be imposed from 01.04.2020.

3.4.3.13 Environmental flow

River Ghaggar flows far away from Chandigarh area. Moreover Sukhna choe and N-Choe, are non-perennial drains and carry storm water during rainy season. As such, maintaining of environmental flows is not possible in case of Chandigarh area.

3.4.3.14 Solid waste management in the drain/Nallah/Choe

CPCC has claimed that Municipal solid waste is being lifted from whole of Chandigarh. No solid waste is being dumped along the drains or otherwise and in case any waste is found dumped same is removed by the Municipal Corporation, Chandigarh at the earliest.

3.4.3.15 Septage and fecal sludge management.

Chandigarh is fully covered with sewerage network and there are no septic tanks allowed in Chandigarh, resulting in no generation for septage and fecal sludge. However, CPCC and M.C., Chandigarh shall identify (if any) the areas where on line sanitation systems have been provided so that plan for management of septage and Fecal sludge may be prepared.

3.4.4 State of Haryana

3.4.4.1 Performance of Existing STPs

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
	Ambala					
1	3.25 MLD STP Naya Gaon , Unit.I , Ambala City by PHED in Janurary, 2011	03.05.2019	12	12	1720000	Complying
		30.09.2019	9.5	13	26000	Complying
2	3.25 MLD STP Naya Gaon , Unit.II Ambala City by PHED in 1.4.2016	03.05.2019	13	16	2120000	Complying
		30.09.2019	9	14	221000	Complying
3	2 MLD STP Sec.7 , Urban Estate , Ambala City Ambala by HUDA in 10.9.2015	30.09.2019	110	109	--	**Non-Complying**

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
4	5 MLD Baldev Nagar , Unit.I , Ambala City by PHED 1.12.2012	30.05.2019	26	26	1200000	Complying
		29.09.2019	19	9	26000	Complying
5	3.25 Baldev Nagar , Unit.II ,Ambala City by PHED in 1.4.2016	30.05.2019	24	22	20000	Complying
		29.09.2019	17	11	1300000	Complying
6	5 MLD Moti Nagar, Unit.I , Ambala City by PHED in June 2010	03.05.2019	6	23	840000	Complying
		30.09.2019	11	17	175000	Complying
7	5 MLD STP Moti Nagar , Unit.II , Ambala City by PHED Ambala in 1.8.2016	03.05.2019	8	12	1410000	Complying
		30.09.2019	10.5	12	41000	Complying
8	6 MLD STP Modal Town, Ambala City by PHED in 1.7.2012	03.05.2019	11	11	2210000	Complying
		30.09.2019	15	13	278000	Complying
9	3.25 Nasirpur Ambala City by PHED in 31.9.2016	03.05.2019	15	38	1720000	Complying
		30.09.2019	17	17	1720000	Complying
10	0.25 MLD Sadopur , Ambala PHED in 31.12.2016	03.05.2019	13	6	790000	Complying
		29.09.2019	11	9	221000	Complying
11	3.25 MLD Devi Nagar , Ambala City by PHED on 31.5.2013	30.05.2019	19	13	20000	Complying
		29.09.2019	19	10	1720000	Complying
12	3 MLD STP Nariangarh , Ambala by PHED in 1.7.2014	30.05.2019	21	22	60000	Complying
		29.09.2019	14	10	172000	Complying
13	25 MLD STP Thanesar, Kurukshetra by PHED in 31.05.2019	**Newly installed**				
14	8 MLD STP Model Town , Pehowa Kurukshetra by PHED in May dt. 2015	19.08.2019	18	25	-	Complying
15	11.5 MLD STP Ladwa Road , Shahbad	05.08.2019	9.5	12	-	Complying

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
	Kurukshetra by PHED in May dt. 2016					
16	18 MLD STP Panchkula by HUDA in 31.12.2002	24.04.2019	16	12	3450000	Complying
		27.09.2019	11	34	270000	Complying
17	39 MLD STP Panchkula by HUDA in Nov. 2011	24.04.2019	14.3	6	1720000	Complying
		27.09.2019	8	9	5000	Complying
18	15 MLD STP Sector- 28, Panchkula by HUDA in 2012	24.04.2019	9.5	6	2210000	Complying
		27.09.2009	9	16	33000	Complying
19	4.5 MLD Kalka Panchkula by PHED in 30.3.2015	18.07.2019	12	17	-	Complying
		27.09.2019	9.5	14	220000	Complying
20	0.25 MLD Kalka Panchkula by PHED in 28.5. 2017	18.07.2019	15	16	1720000	Complying
		27.09.2019	8	13	140000	Complying
21	5 MLD STP Nalagarh Road, Manakpur, Pinjore Panchkula by PHED 31.1.2015	18.07.2019	9.5	11	2210000	Complying
		27.09.2019	12	11	210000	Complying
22	9 MLD STP Garrison Engineer , Chandimandir Panchkula in April 2012	27.09.2019	10	12	7000	Complying
	Jind					
23	15 MLD STP by PHED Jind in Jan, 2009	-	24	30	18500	Complying
		-	99	270	30900	**Non-Complying**
24	10 MLD by HUDA Jind in 27.12.2014	-	10	12	9200	Complying
		-	90	270	46400	**Non-Complying**
25	3.5 MLD Patiala Road , Narwana by PHED in Jan , 2011	-	26	30	11300	Complying
		-	26	40	28000	Complying
26	3.75 MLD STP Narwana Jind by PHED in Jan , 2011	-	18	26	12800	Complying
		-	24	40	76000	Complying

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
27	02 MLD STP, PHED , Dablain Road, Narwana, Jind (24.5.2017)	-	22	18	10900	Complying
		-	26	38	1800	Complying
28	2 MLD STP Uchana Jind by PHED in 22.2.2012	-	22	26	12200	Complying
		-	22	35	23000	Complying
29	1.5 MLD Uchana by PHED in 31.5.2013	-	18	30	12900	Complying
		-	18	20	110000	Complying
30	5 MLD STP Jind by PHED in 1.4.2016	-	22	30	12800	Complying
		-	28	36	2000	Complying
31	4 MLD STP Julana ,Jind by PHED in 1.4.2016	-	90	320	29200	**Non-Complying**
32	9 MLD STP Safidon , Jind by PHED in 31.05.2018	-	18	20	10200	Complying
		-	14	16	2400	Complying
33	10 MLD STP Cheeka , Kaithal by PHED in 1.4.2013	-	24	40	12200	Complying
		-	20	40	25000	Complying
34	10 MLD STP , Jind Road Kaithal by PHED in September , 2012		12	16	12500	Complying
			88	22	110000	**Non-Complying**
35	10 MLD STP Manas Road, Kaithal by PHED in June , 2006 (MBBR)		8	10	13800	
			60	190	23000	**Non-Complying**
36	10 MLD Manas Road,Kaithal by PHED in Sep , 2012 (SBR)		22	30	11200	Complying
			10	14	76000	Complying
37	7.5 MLD Kaithal by HUDA in 31.8.2016		12	16	9400	Complying
			22	14	56000	Complying
38	5 MLD STP Kalayat , Kaithal by PHED in 1.4.2014		22	30	10900	Complying
			24	30	-	Complying

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
39	3.5 Pundri Kaithal by PHED in 4.7.2014		24	30	11500	Complying
40	6.5 MLD STP Hansi , Hisar by PHED in 31.05.2019		8	14	-	Complying
41	5 MLD STP Dhani Kushal , Bhiwani Road, Hansi , Hisar by PHED in 15.4.2014		27	72	-	Complying
			24	36	22000	Complying
42	7.5 MLD STP Lalpura. Jind Road, Hansi , Hisar by PHED in 15.4.2014		26	80	-	Complying
			26	40	18000	Complying
43	6 MLD STP Dhani Gram ,Barwala, Hisar by PHED in 9.12.2014		14	26	14600	Complying
			60	72	Nil	**Non-Complying**
44	15 MLD STP Azad Nagar, Rajgarh Road Hisar by PHED in 31.12.2014		8	10	9200	Complying
			12	10	36000	Complying
45	40 MLD STP Rishi Nagar , Hisar by PHED in 02.12.2017		8	10	10600	Complying
			8	10	10600	Complying
46	4 MLD STP Narnaund, Hisar by PHED		8	10	19200	Complying
			8	18	22000	Complying
47	6.5 MLD STP Uklana, Hisar by PHED in 1.9.2017		22	20	16500	Complying
			46	140	110000	**Non-Complying**
48	15 MLD STP Dabara Tosham Road , Hisar by HUDA in 31.7.2014		8	10	13600	Complying
			9	14	22,800	Complying
49	4 MLD STP Kaimri Road, Hisar by PHED in 2018		6	10	9400	Complying
			6.5	10	2200	Complying
50	15 MLD STP dt. Shamsabad patti , Kalania Road, Sirsa by PHED in 1.7.2012		24	30	16300	Complying

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
			26	40	9600	Complying
51	5 MLD STP ,Vill. Nattar 1 , Sirsa by PHED in 1.5.2013		18	20	-	Complying
			28	60	77000	Complying
52	5 MLD STP , Vill. Nattar 2 , Sirsa by PHED in 14.09.17		20	28	-	Complying
			24	40	22000	Complying
53	7.5 MLD STP Ellenabad Sirsa by PHED in 11.5.2015		10	12	12300	Complying
			46	50	63000	**Non-Complying**
54	9.5 MLD STP, Daddu Road,Kalanwali , Sirsa by PHED in 17.02.2018		9	28	33000	Complying
55	6 MLD STP Rania Sirsa by PHED in 30.6.2017		8	10	9600	Complying
			8	16	160000	Complying
56	16.5 MLD STP Dabwali, Sirsa by PHED in 04.12.2017		8	12	9600	Complying
			12	20	42000	Complying
57	10 MLD STP Vill. Bhodia Khera dt. Bhattu Road dt. Fatehabad by PHED in 1.4.2013		24	18	15900	Complying
			22	40	12400	Complying
58	10 MLD STP Vill.Amani, Tohana, Distt. Fatehabad by PHED in 1.4.2013		22	26	14100	Complying
			24	30	76000	Complying
59	6.5 MLD STP Ratia , Fatehabad by PHED in 1.9.2014		14	20	17500	Complying
			24	20	77000	Complying
60	10 MLD STP Majra, Fatehabad by HUDA in 16.12.17		6	10	9300	Complying
			6	10	ND	Complying
61	5 MLD STP Kharati Khera Road, Fatehabad by PHED in 31.10.2018		10	10	10100	Complying

Sr. No.	Name of town/STP	Outlet of STP				Compliance status w.r.t BOD and TSS parameters only
		Collection date	BOD mg/l (30)	TSS mg/l (100)	F.Coli	
			8	10	12300	Complying
62	3 MLD STPJhakhal Mandi, Fatehabad by PHED in 30.9.2019	**Newly installed.**				

The above data indicate that out of 61 STPs monitored during the year 2019, 9 STPs are not meeting with all the important parameters namely BOD, TSS and F.Coli parameters. Remaining 52 STPs are meeting with BOD and TSS parameters. None of the STP is meeting with F. coli parameter.

3.4.4.2 Status of installation of New STPs

Sr. No.	Name of the Town	Capacity (in MLD)	Timelines proposed as per Action Plan	Progress report as on 30.11.2019
1.	Barara	4	30.11.2019	100%
2.	Jind	7	30.11.2019	100%
3.	Sec-6, Urban Estate, Thanesar	15	31.03.2020	100%
4.	Kurukshetra	25	31.05.2019	100%
5.	12 Cross Road, Ambala	12	31.06.2020	5%
6.	Khagesara & Toka	0.5	31.03.2020	82%
7.	Nangal & Allipur	0.5	31.03.2020	87%
8.	Khatoli	0.75	31.03.2020	42%
9.	Kot	0.75	31.01.2020	92%
10.	Sukhdarshanapur	0.75	31.03.2020	72%
11.	Billa	0.75	31.12.2020	5%
12.	Village Dabra	8	31.03.2020	46%
13.	Ambala	5	31.03.2020	30%
14.	Khuda Khurd, Ambala	12	31.06.2020	2%
15.	Sirsa (Kelinia)	20	30.10.2019	100%
16.	Fatehabad(Jakhal Mandi)	3	31.12.2019	100%
17.	Bhuna	8	30.06.2020	60%

The data w.r.t installation of new STPs indicate that 6 new STPs have been completed to 100%. Progress in 3 STPs is very poor (2-5%). In rest of 8 new STPs, the progress varies between 30 - 92%.

3.4.4.3 Status of upgradation of Existing STPs

Sr. No.	Name of Town	STP Capacity	Estimated cost (Rs. In Lacs)	Likely date of completion	Status of upgradation
1	Ambala city (G) Naya Gaon unit II	3	517	31.12.2021	Tender floated 7 times but no agency participated.
2	Naya Goan unit-I	3.25			Tender floated 7 times but no agency participated.
3	Baldev Nagar unit I	5	661.7	31.12.2021	Tender floated 7 times but no agency participated.
4	Baldev Nagar unit II	3.25			Tender floated 7 times but no agency participated.
5	Moti Nagar unit I	5	825.8	31.12.2021	Tender floated 7 times but no agency participated.
6	Moti Nagar unit II	5			Tender floated 7 times but no agency participated.
7	Model town	6			Land not available for upgradation of existing STP
8	Devi Nagar	3	274.7	31.12.2021	Tender floated 7 times but no agency participated.
9	Nasirpur	3.25	350.5	31.03.2021	Tender floated 7 times but no agency participated.
10	Cheeka(G)	10	519.12	31.03.2020	Work allotted
11	Ellanabad	7.5	576.1	28.02.2021	Work allotted
12	Fatehabad (G) Bhodia Khera	10	769.05	31.01.2021	Work allotted
13	Fatehabad (G) Amini Tohana	5			
14	Jind	15	896.5	31.03.2020	Work allotted

Sr. No.	Name of Town	STP Capacity	Estimated cost (Rs. In Lacs)	Likely date of completion	Status of upgradation
15	Jind	5			DPR under preparation
16	Manas road	10	711.25	30.06.2020	Work allotted
17	Kalka (G) and (part of Panchkula)	4.5			Land not available for upgradation of existing STP
18	Pinjore	5			Work allotted
19	Kalayat (G)	5	461.55	31.12.2019	work allotted
20	Naraingarh (G)	3	437	31.03.2021	DNIT under preparation
21	Narwana(G)	3.5			Estimate under preparation
22	Narwana	3.75			
23	Narwana	2			
24	Pehowa (G)	8	443	31.03.2021	Tender invited 2 times but not tender received.
25	Pundri	3.5	412.75	31.03.2020	Work allotted
26	Ratia	6.5	502.25	31.03.2021	Work allotted
27	Sirsa (G)	15	1141.75	31.03.2021	Work allotted
28	Natter-I, Sirsa	5	2295	31.05.2022	DNIT approved tender floated
29	Natter-II, Sirsa	5			DNIT approved tender floated
30	Tohana (G)	10	758.95	31.03.2021	Work allotted
31	Uchana	2	276.5	31.03.2021	DNIT under preparation
32	Uchana	1.5	76.95	31.03.2021	DPR under preparation

3.4.4.4 Status of utilization of treated sewage of the towns for irrigation purposes

S.No	Name of the town	Capacity of STP	Area to be irrigated (Hectares)	Status of Irrigation Scheme	If irrigation scheme is not commissioned, its latest status.
1	STP Pehowa (Distt-Kurukshetra)	1.47 MLD	76	Irrigation scheme is in operation and water is being used by farmers in Kharif	**These are Pilot Projects and Commissioned with** Cost of Rs 378.00 lakh. With these

				season	schemes, 5 Villages were benefitted
2	STP Ladwa (Distt-Kurukshetra)	1.22 MLD	63	Irrigation scheme is in operation and water is being used by farmers in Kharif season	
3	STP Shahbad (Distt-Kurukshetra)	3.00 MLD	151	Irrigation scheme is in operation and water is being used by farmers in Kharif season	

3.4.4.5 Status of Irrigation schemes under Planning

S.No	Name of the town	Capacity of STP	Area to be irrigated (Hectares)	Status of Irrigation Scheme	If irrigation scheme is not commissioned, its latest status.
1	Panipat, HSVP STP Irrigation Project (Barsat Road)	30 MLD	2462	Under process for discussion/deliberation and approval	Not started yet.-17 villages shall be benefitted (Cost of Project-Rs. 1566 lacs)
2	Panipat, PHED STP Irrigation Project (Village Siwah)	60 MLD	4913	Approved by Govt. and Tender process to be initiated shortly after completing formalities.	Not started yet-30 villages shall be benefitted (Cost of Project-Rs. 2020 lacs)
3	Karnal STP Irrigation Project of MC Karnal	50 MLD	4185	Under process for discussion/deliberation and approval	Not started yet-28 villages shall be benefitted (Cost of Project-Rs. 3004lacs)
4	Karnal (H&S) TWW Irrigation Project	18MLD	1195	DPR under process for discussion/deliberation and approval	Not started yet. (Cost of Project-Rs. 608 lacs)

3.4.4.6 Inspection of industries/STPs by HSPCB and action taken against the violating industries/operating agencies of STPs.

- Regional officer, Panchkula, HSPCB has inspected 31 industries during Oct, 2019 to December 15, 2019. Out of these 31 units, 9 industries were found complying the norms. Out of 22 non-complying units, 8 industries have been closed under the Water Act, 1974 and action against remaining 14 industries is under process.
- Besides, HSPCB has visited 21 Bajri and Sand screening plants, out of which 8 units have been closed. Show cause notices have been issued to 13 units.
- 9 miscellaneous units, inspected by HSPCB, have been found complying and show cause notice issued to 1 non complying unit.

3.4.4.7 Inspection of industries/STPs by District level task Force (DLSTF) and action taken against the violating industries/operating agencies of STPs.

No inspection has been carried out by DLSTF

3.4.4.8 Water quality of river Ghaggar at various points at the entry and exit points of sewage disposal systems for the period May, June and September, 2019 and October, November and December, 2019 and comparison of the data.

The status is under:

1. Ghaggar river before meeting discharge of STP Sec-28 at Kakrali, Punjab.

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	6	8	4	6.5
2	TSS	11622	6146	7	112

2. Ghaggar river after meeting discharge of STP Sec-28 at Kakrali, Punjab.

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	11	10	8	15
2	TSS	5656	6112	110	59

3. **Ghaggar River before mixing Ghail Drain at Samaspur (Ambala).**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	5.09.2019	11.10.2019
1	BOD	7	Nil flow	7.5	5.5
2	TSS	5742		124	70

4. **Ghaggar River after mixing Ghail drain at Samaspur (Ambala)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	12	Nil flow	18	8
2	TSS	6364		212	116

5. **Ghaggar River after meeting Sukhna Choe at Vill- Bhankarpur, Punjab**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	12	12	6	4.5
2	TSS	6462	6184	190	60

6. **Sukhna choe at Vill- Bhankarpur, Punjab**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	65	110	64	64
2	TSS	88	308	112	110

7. **Ghaggar River before meeting Sukhna Choe at Vill- Bhankarpur, Punjab**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	32	20	30	38
2	TSS	6482	3802	114	114

8. **Ghaggar River before meeting Derabassi Drain near Vill- Bakkarpur (Punjab) (Upstream)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	8	10	7	7
2	TSS	7410	6232	120	116

9. **Derabassi drain near Vill- Bakkarpur (Punjab).**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	13	12	46	50
2	TSS	16	22	59	90

10 **Ghaggar River after meeting Derabassi near Vill- Bakkarpur (Punjab).**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	27.06.2019	05.09.2019	11.10.2019
1	BOD	11	11	18	10
2	TSS	4912	6164	164	87

11. **Ghaggar River before meeting Basauli Choe at Vill- Tepla (Punjab)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	12	Nil flow	8	5
2	TSS	6402		218	92

12. **Bassauli Choe at vill. Tepla (Punjab)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	42	Nil flow	110	60
2	TSS	128		114	72

13. **Ghaggar River after meeting Basauli Choe at Vill- Tepla (Punjab)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	21	Nil flow	24	7
2	TSS	5200		120	118

14. **Ghaggar river before meeting Jharmal Choe at Vill- Tiwana (Punjab)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	11	Nil flow	6.5	6
2	TSS	6522		122	214

15. **Jharmal Choe at Vill- Tiwana (Punjab)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	50	Nil flow	115	54
2	TSS	192		172	111

16. **Ghaggar River after mixing Jharmal Choe, At- Vill- Tiwana, (Punjab)**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	18	Nil flow	50	8
2	TSS	5594		123	122

17. **Ghaggar River after mixing Pachis Draha drain at Sarala khurd (Patiala).**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	9	Nil flow	10	8
2	TSS	5422		312	67

18. **Pachis Draha drain at Vill- Sarala Khurd (Patiala).**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	42	Nil flow	58	23
2	TSS	162		78	124

19. **Ghaggar River before mixing Pachis Draha drain at Vill- Sarala Khurd (Patiala).**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	June	05.09.2019	11.10.2019
1	BOD	14	Nil flow	23	12
2	TSS	6146		208	64

20 **Ghaggar River, Near Burjkotia, Panchkula**

Sr. No.	Parameters	Date	Date	Date
		May	June	11.10.2019
1	BOD	Nil flow	Nil flow	6
2	TSS			328

21. **Ghaggar River before meeting river Markanda at Village Chiali. (Longitude $76^0$25.974' and Latitude $30^0$07.695')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	14	16	90	112
2	TSS	40	30	75	95
3	DO	4.9	4.2	2.9	2.3

22. **Markanda River Bhagal Bridge. (Longitude 76^{0}26.218' and Latitude 30^{0}05.025')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	22.00	20	60	78
2	TSS	70	60	38	58
3	DO	5.9	5.7	3.1	2.9

23. **Ghaggar River after mixing Markanda River at village Dhandota. (Longitude 76^{0}22.571' and Latitude 30^{0}05.410')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	36.00	38	120	110
2	TSS	40	30	40	56
3	DO	4.3	4.3	0.7	1.2

24. **Ghaggar River before mixing, Patiala Nadi at Vill. Bhatia. (Longitude 76^{0}14.696' and Latitude 30^{0}04.717')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	70	60	70	86
2	TSS	110	90	160	140
3	DO	3.1	3.4	3.2	2.8

25. **Patiala Nadi before mixing River Ghaggar**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	70	70	110	92
2	TSS	170	190	85	72
3	DO	2.9	3.2	1.3	1.9

26. **Ghaggar River after mixing of Patiala Nadi at Village Ratanheri. (Longitude 76^{0}14.542' and Latitude 30^{0}04.645')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	60	50	96	112
2	TSS	160	140	105	92
3	DO	2.2	2.4	1.5	1.3

27. **Ghaggar River before mixiing Sagar Para Drain at Village Rasoli. (Longitude 76^{0}10.173' and Latitude 29^{0}54.305')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	24	20	135	126
2	TSS	60	50	120	34
3	DO	4.3	4.3	0.6	1.9

28. **Sagar Para Drain before mixing in Ghaghar river, Village Sagra. (Longitude 76^{0}11.249' and Latitude 29^{0}52.976')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	42.00	36	90	70
2	TSS	40	30	70	83
3	DO	3.7	3.4	1.2	1.5

29. **Ghaggar River after mixing of Sagar Para Drain at Village Rasoli. (Longitude 76^{0}10.135' and Latitude 29^{0}53.548')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	24.00	22	70	64

2	TSS	60	50	68	78
3	DO	3.4	3.6	2.7	2.1

30. **River Ghaggar before mixing point of Khanauri drain**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	22	24	96	70
2	TSS	70	60	70	52
3	DO	4.3	4.2	1.7	2.2

31. **River Ghaggar after mixing Kaithal Darin into River Ghaggar. (Longitude 76^{0}06.663' and Latitude 29^{0}50.723')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	18	20	110	96
2	TSS	30	40	120	112
3	DO	5.4	5.6	0.9	1.2

32. **River Ghaggar before meeting discharge of Moonak Town. (Longitude 75^{0}53.763' and Latitude 29^{0}48.503')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	26.00	26	80	90
2	TSS	30	40	95	78
3	DO	4.3	4.3	2.2	1.9

33. **Discharge of Moonak Town into River Ghaggar. (Longitude 75^{0}53.729' and Latitude 29^{0}48.510')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	18	20	70	96
2	TSS	40	60	70	90
3	DO	4.9	4.3	1.3	0.7

34. **River Ghaggar after meeting discharge of Moonak Town with River Ghaggar. (Longitude 75^{0}53.702' and Latitude 29^{0}48.515')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	32	34	90	90
2	TSS	30	30	55	55
3	DO	4	4	0.9	0.9

35. **River Ghaghar before meeting Jhambuwali Choe at Village Chandu. (Longitude 75^{0}00.100' and Latitude 29^{0}49.736')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	40	36	60	60
2	TSS	60	50	38	38
3	DO	3.9	3.7	2.7	2.7

36. **Disharge of Jhambuwali Choe at Village Chandu. (Longitude 75^{0}00.061' and Latitude 29^{0}49.794')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	24.00	22	110	96
2	TSS	20	30	42	65
3	DO	5.1	4.8	2.9	2.5

37. **River Ghaghar after meeting Jhambuwali Choe at Village Chandu. (Longitude 75^{0}59.989' and Latitude 29^{0}49.717')**

Sr. No.	Parameters	Date	Date	Date	Date
		27.05.2019	12.06.2019	26.09.2019	18.10.2019
1	BOD	64.00	56	120	80
2	TSS	50	40	90	70
3	DO	2.7	3.2	1.3	1.7

38. **River Ghaggar before meeting discharge of Ratia.**

Sr. No.	Parameters	Date	Date	Date	Date
		28.05.2019	27.06.2019	27.09.2019	30.10.2019
1	BOD	40	40	50	38
2	TSS	60	70	40	80
3	DO	-	4.6	1.2	3.2

39. **Discharge of Ratia Town through drain (Longitude 29.711468 and Latitude 75.551894)**

Sr. No.	Parameters	Date	Date	Date	Date
		28.05.2019	27.06.2019	27.09.2019	30.10.2019
1	BOD	24	22	28	32
2	TSS	30	30	38	45
3	DO	-	4.5	3.2	3.9

40. **River Ghaggar after meeting of discharge of Ratia.**

Sr. No.	Parameters	Date	Date	Date	Date
		28.05.2019	27.06.2019	27.09.2019	30.10.2019
1	BOD	46	46	46	24
2	TSS	70	80	47	22
3	DO		4.1	2.6	4

41. **River Ghaggar before meeting discharge of Sardulgarh town**

Sr. No.	Parameters	Date	Date	Date	Date
		28.05.2019	27.06.2019	27.09.2019	31.10.2019
1	BOD	46	44	46	38
2	TSS	70	60	85	110
3	DO	-	4.8	3.8	3.2

42. **Discharge of Sardulgarh town**

Sr. No.	Parameters	Date	Date	Date	Date	Date
		28.05.2019	27.06.2019	02.09.2019	27.09.2019	31.10.2019
1	BOD	16	18	21	22	20
2	TSS	20	24	40	26	26
3	DO	-	3.9	2.8	3.9	3.7

43. **River Ghaggar after meeting discharge of Sardulgarh town**

Sr. No.	Parameters	Date	Date	Date	Date
		28.05.2019	27.06.2019	27.09.2019	31.10.2019
1	BOD	32	42	56	36
2	TSS	70	90	60	80
3	DO	-	4.2	2.7	3.1

44. **Ghaggar Ottu Weir**

Sr. No.	Parameters	Date	Date	Date	Date
		20.05.2019	28.06.2019	24.06.2019	02.09.2019
1	BOD	46	34	54	22
2	TSS	410	4	260	40
3	DO	-	-	4.2	5.2

45. **Ghaggar before ottu weir (before mixing with Sutlej canal water)**

Sr. No.	Parameters	Date	Date	Date	Date
		14.05.2019	24.06.2019	19.09.2019	10.10.2019
1	BOD	50	52	70	22
2	TSS	-	260	140	128
3	DO	3.4	4.2	1.9	2.8

3.4.4.9 Groundwater quality along the catchment area of river Ghaggar falling in the jurisdiction of State of Haryana.

Sr. No.	Region	No. of groundwater samples collected	Complying	Non-complying
1.	Panchkula	39	38	1
2.	Ambala	25	24	1
3.	Jind	2	1	1
4.	Kaithal	13	6	7
5.	Sirsa	49	15	34
6.	Fatehabad	37	17	20

HSPCB shall ensure that the groundwater sources which have been found contaminated may not be allowed to be used and display boards be put up mentioning that **groundwater source is not fit for drinking purposes**.

3.4.4.10 Installation of OCEMS and CCTV cameras on ETP by the industries and STPs by the Department Urban Local bodies/any other responsible agencies

3.4.4.10.1 The status of installation of CCTV cameras on STPs is as under:-

Out of total 62 STPs, CCTV cameras have been installed on 57 STPs and CCTV on the remaining STPs shall be installed by 31.3.2020. With regard to installation of OCEMS on STPs, it has been reported by HSPCB that OCEMS on 56 STPs have been installed.

3.4.4.11 Status of health Checkup camps in the catchment area Ghaggar.

Compiled Report of Health Camps Along River Ghaggar Jan, 2019-October, 2019.													
S. No.	Name of the district	No. of camps in the district	Disease Burden of the Catchments Area										
			Skin Diseases	Gastro-intestinal	Respiratory	Cardiac/ HTN	Diabetes	Osteoarthritis	Kidney Diseases	Gynae	Cancer	Other	Total
1	Ambala	18	300	93	261	68	20	40	3	33	0	698	1534
2	Fatehabad	22	240	188	200	42	122	111	3	55	0	338	1321
3	Kaithal	45	365	230	215	99	205	161	1	181	0	535	2037

4	Panchkula	10	86	60	54	404	208	33	0	90	13	519	1477
5	Sirsa	13	120	86	53	61	53	94	8	103	3	204	798
	Total	**108**	**1111**	**657**	**783**	**674**	**608**	**439**	**15**	**462**	**16**	**2294**	**7167**

3.4.4.12 Status of installation of STPs for treatment of sewage/sullage of villages.

List of the villages covered under action plan for treatment of sewage/sullage of villages discharging wastewater directly /indirectly in river Ghaggar.

Sr. No.	Name of Village	Target date of completion	Remarks
District Fatehabad			
1	Talwara	31.12.2020	---
2	Talwari	31.12.2020	---
3	Talwari Dhani	31.12.2020	---
4	Kanwalgarh	31.12.2020	---
5	Khairpur	31.12.2020	---
6	Malwala	31.12.2020	---
7	Sadanwas	31.12.2020	---
District Panchkula			
8	Daluwal	31.12.2020	Funds will be approved/released at distt. Level
9	Burj Kotia	31.12.2020	Funds will be approved/released at distt. Level
10	Khetpurali	31.12.2020	Funds will be approved/released at distt. Level
11	Bharouli	31.12.2020	Funds will be approved/released at distt. Level
12	Rehore	31.12.2020	Funds will be approved/released at distt. Level
13	Toda	31.12.2020	Funds will be approved/released at distt. Level
14	Mouli	31.12.2020	Funds will be approved/released at distt. Level
District Sirsa			
15	Jagdishpura	31.12.2020	Gram Panchayat will divert the waste water to existing pond at its own level.
16	Harnola	31.12.2020	Work sanctioned under SBM- G. Tender under process
17	Ratta Khera Lukman	31.12.2020	Gram Panchayat will divert the waste water to existing pond at its own level.
18	Ghuna	31.12.2020	Suitable land not available for WSP. Alternate method/technology is being explored.
19	Keorak	31.12.2020	Work is already in progress under Mahagram Yojna by PHED
20	Patti Afgan	31.12.2020	Suitable land not available for WSP. Alternate method/technology is being explored.
21	Kakaut	31.12.2020	Suitable alnd not available for WSP. Alternate method/technology is being explored.
22	Sega	31.12.2020	Suitable land not available for WSP. Alternate method/technology is being explored.
23	Teontha	31.12.2020	Suitable land not available for WSP. Alternate method/technology is being explored.

24	Kaul	31.12.2020	Work of laying sewerage system and STP already taken up by PHED under Mahagram by Yozana besides CADA has also taken up one pond of installation of Mircro Irrigation system.
25	Ujhana	31.12.2020	Suitable land not available for WSP. Alternate method/technology is being explored.

3.4.4.13 Compliance report of the directions given / recommendations made by the Executive Committee during its 15th Meeting held with the State level officers of State of Haryana.

Sr. No	Points	Status
1	All the new STPs shall be installed and commissioned within the time schedule as mentioned at point No.1 and these STPs shall achieve the standards as directed by Hon'ble NGT in OA No. 1069of 2016 in the matter of Nitin Shankar Desh Pandey Vs.UOI & Ors. at BOD 10 mg/l and other parameters.	Department of Urban Local bodies/other concerned agencies of the State shall ensure to comply with the directions/recommendations of the Committee.
2	All the STP should be mentioned for all the parameters including F.coli, parameter, STPs may be considered compliant, only if, these meet with the standards prescribed for all the parameters including F.Coli parameters.	HSPCB shall ensure to comply with the directions / recommendations of the Committee
3	All the STPs in rural areas, as proposed by the department of Panchayat shall be completed and commissioned by 31.12.2021.	Department of Panchayat of State of Haryana shall ensure to comply with the directions
4	The department of Public health Engineering shall ensure that the treated sewage of all STPs may be utilized for gardening, construction activity and irrigation purposes in a time bound manner. However, regarding use of treated sewage for irrigation, its quality may be compared with water quality as prescribed by Agriculture University of the State.	The Department of Public Health Engineering shall ensure to comply with the directions of the Committee in a time bound manner.
5	The Executive Committee has observed that water quality of river Ghaggar has started degrading at the plant where Ghail drain meets river Ghaggar. Therefore, the concerned department of State of Haryana shall make efforts to install the remaining STPs and upgrade the existing STPs to meet the latest standards as directed by Hon'ble NGT in OA No. 1069 of 2018 in a time bound manner so that water quality in river Ghaggar may be improved.	The Department of Urban Local bodies and the concerned department have to make effort to install the remaining new STPs and upgrade the existing STPs in a time bound manner.

<table>
<tr><td>6</td><td>The Chairman of the Monitoring Committee directed that wherever the groundwater quality is found unfit for drinking purpose, such water sources be capped and a display board mentioning that "Water is not for drinking purpose" may be placed.</td><td>HSPCB has to ensure the compliance of the directions / recommendations of the Committee.</td></tr>
<tr><td>7</td><td>OCEMS and CCTV cameras on all the STPs and ETPs of the industries as identified by the HSPCB should be installed by 31.12.2019. These STPs and ETPs should have their connectivity with HSPCB server.</td><td>Status of installation of OCEMS on STPs in the catchment of River Ghaggar is as under:
<table>
<tr><th>Sr. No</th><th>Department Name</th><th>Required to be installed</th><th>Installed as per online status</th><th>Connected with HSPCB Server</th></tr>
<tr><td>1</td><td>PHED</td><td>53</td><td>50</td><td>48</td></tr>
<tr><td>2</td><td>HSVP</td><td>8</td><td>6</td><td>3</td></tr>
<tr><td>3</td><td>ULB/GE</td><td>1</td><td>0</td><td>0</td></tr>
<tr><td colspan="2">TOTAL</td><td>62</td><td>56</td><td>51</td></tr>
</table></td></tr>
<tr><td>8</td><td>The District Level Task Force shall also visit the industries/pollution sources and action against the violating industries/responsible agencies of STPs may be recommended to HSPCB to take legal action as per the provision of Water Act, 1974</td><td>Necessary directions have been given to DLSTF.</td></tr>
<tr><td>9</td><td>In the health check up camps, the patients may be examined especially for water born diseases in the area which are located near the bank of river Ghaggar.</td><td>Directions already given to the Health Department for compliance.</td></tr>
</table>

3.4.4.14 Environmental Flow

Ghaggar river is not a perennial river and its discharge varies between zero to maximum during flood seasons. Around 15-20% of the lowest possible discharge in the lean season is required for maintaining E-flow. The State of Haryana has claimed that the discharge of river Ghaggar varies from zero to maximum, therefore, maintaining E-flow in the river may not be possible.

3.4.4.15 Solid Waste Management in the catchment area of river Ghaggar.

HSPCB and Department of Irrigation of State of Haryana shall identify the stretches of drains and rivers where the solid waste is lying dumped and the same shall be removed by 31.03.2020.

3.4.4.16 Septage and Faecal Sludge management.

The following steps have been taken by the state of Haryana for septage and Faecal Management.

Municipal Corporation, Gurugram is doing the disposal of sewage through tankers in Gurugram in some areas. Municipal Corporation, Gurugram has made septage management policy and ULBD has given directions to other Municipalities vide their letter dated 23.07.2019 to frame their policy for septage management as per their local conditions adopting the policy of MC, Gurugram.

The Executive Committee recommends that the concerned departments of State of Haryana shall identify the rural area and others areas, wherever, septage and fecal sludge is generated by 28.02.2020 and their management in environmentally sound manner be made by 31.05.2020.

3.4.4.17 Creating awareness through Information, Education and Communication (IEC) activities.

- **Awareness Activities from May 2019 to Dec 2019**

Sr No.	Town Name	Event	Place Name	Event Date	Activity details
1.	Sirsa	World Earth Day	Govt. Sr. Sec School, Khairpur, Sirsa. Rajkiya Govt. Model Sanskriti School, Sirsa	22-04-19	Rally, plantation, drawing competition, quiz competition etc.
2.	Kaithal	Awareness program	Anaz Mandi, Kaithal	11-04-19	Awareness program has been conducted to stop wheat stubble /left-over burning
3.	Jind	Awareness program	Ananz Mandi Jind	04-04-19	Awareness program has been conducted regarding to stop wheat stubble / left over burning
4.	Jind	Awareness program	Rural area Tehsil Safidon,Jind	23-04-19	Awareness program has been conducted regarding to stop wheat stubble / left over burning
5	Bhiwani	World Wetlands Day	Dharmesh Textiles Ltd., Unit-B, Plot No. 81, Sector-21, I.A., Bhiwani	02-02-19	World Wetland Day 02 February, 2019 was celebrated by HSPCB

6	Bhiwani	Drawing program	Govt. Girls School, Dadri	01-03-19	District Level Drawing program has been organized for district Chakrhi Dadri
7	Panchkula	Awareness program	Sec-12-A, Panchkula	30-10-18	Awareness program regarding Say No to Crackers
8	Kathurah	Awareness program		30-10-18	Awareness program regarding Say No to Crackers
9	Kairu	Awareness program	Geeta Jayanti from 13.12.2018 to 18.12.2018.	13-12-18	Awareness about reduction in problem of flies in poultry farms.
10	Kurukshetra	Awareness program	Kurukshetra	18-12-18	Awareness about reduction in problem of flies in poultry farms.
11	Ambala	Awareness program	Govt. Girls High School, Shahzadpur, Ambala	05-11-18	Anti Cracker rally of Diwali Festival
12	Ambala	Awareness program	Govt. Sr. Sec. School, Baldev Nagar, Ambala City	26-01-19	Awareness program at regarding say no to plastic.
13	Ambala	World Wetlands Day	Govt. Sr. Sec. School, Baldev Nagar, Ambala City	02-02-19	Awareness program at regarding Wetland Day
14	Kurukshetra	World Wetlands Day	Govt. Sr. Sec School, Devidasspura, Distt. Kurukshetra	02-02-19	Awareness program at regarding Wetland Day
15	Panchkula	World Wetlands Day	Govt. Sr. Sec. School, Sec-25, Panchkula	02-02-19	Awareness program at regarding Wetland Day
16	Bhiwani	World Environment Day	Govt. Girl School, Bhiwani	05-06-19	District Level program regarding Beat Air Pollution theme is Association with Eco clubs, Edu. Deptt..
17	Bhiwani	World Environment Day	Adarsh Divyang School, Bhiwani	31-05-19	A function organized in Adarsh Divyang, School, Bhiwani Beat Air Pollution theme on Environment Day
18	Bhiwani	World Environment Day	ESI Hospital, Bhiwani	03-06-19	Awareness program organized regarding Beat Air Pollution theme in

					Association with IMA, Bhiwani
19	Jind	World Environment Day	Govt. Middle School, Habatpur, Jind	30-05-19	awareness program organized in Govt. Middle School, Habatpur, Jind alongwith staff and students. Various competitions
20	Kaithal	World Environment Day	General Hospital Guhla, Kaithal	03-06-19	Tree plantation program organized alongwith
21	Charkhi Dadri	World Environment Day	MSK JV Mining Units, Jhojhu Kalan, Bhiwani	03-06-19	Tree Plantation program organized alongwith forest department
22	Ambala		M/s Epic Food Products (P) Ltd., Vill. Mohra, NH-1, Distt -Ambala	03-06-19	World Environment Day
23	Panchkula	World Environment Day	Celebrated at Sarthak School, Sec-12-A, Panchkula	05-06-19	World Environment Day Celebrated
24	Panchkula	World Environment Day	Amravati Enclave.	05-06-19	Tree Plantation.
25	Null	World Environment Day	Stone Crusher Zone, Burjkotian, Panchkula	05-06-19	Tree Plantation
26	Sirsa	Other	Bhambhur	26-06-19	HSPCB and Govt. School, Bhambhur, Sirsa
27	Panchkula	Awareness program	Sarthak Public School, Sec-12, Panchkula	25-10-19	Say no to Crackers rally
28	Panchkula	Awareness program	The SKY World School, Sec-21, Panchkula	25-10-19	Say no to Crackers rally
29	Sirsa	Awareness program	Govt. Senior Secondary School, Vill.-Ottu, Sirsa	29-11-19	For proper and scientific disposal of solid waste management

The above data indicate that IEC activities have been carried out only on prohibiting the burning of paddy straw/ left over residue, discoursing the use of fire crackers, tree plantation and wet land issue. No IEC activities have been carried out with regard to control of pollution due to discharge of untreated domestic and industrial effluent and solid waste into river Ghaggar and contamination of ground water along river Ghaggar, if observed, at any location and awareness regarding not to use the contaminated ground water for drinking purposes.

3.4.4.18 Water Shed Management

The Water Shed Management in the State of Haryana has to be done in Ghaggar catchment area by Department of Agriculture of State of Haryana. The said department shall submit its proposal / action taken report by 31.01.2020.

3.5 Conclusions and recommendations

Conclusions and Recommendations w.r.t State of Punjab, State of Himachal Pradesh, U.T. Chandigarh and State of Haryana.

- The Executive Committee held two bi-monthly meetings with State Level Officers of State of Punjab, Haryana, Himachal Pradesh and U.T. Chandigarh from August, 2019 to November 2019 and in these meetings, the issues, w.r.t. performance status of existing STPs, Status of STP sunder construction, STPs under planning and status of their funds, STPs which require technology upgradation to meet with the latest standards, status of industries visited by the concerned State Pollution Control Boards/ Committee and action taken against defaulting industries, quality of water of River Ghaggar and drains / nallahs / choes entering into it, ground water quality of the water sources existing in the vicinity of river Ghaggar and status of health checkup camps held in the catchment area of river Ghaggar, were discussed and deliberated.
- The Committee also visited industries to check the performance of their ETPs, sewage treatment plants of State of Haryana, Punjab and U.T. Chandigarh and recommendations of the Committee were sent to the concerned State Pollution Control Boards and Urban Local Bodies to take action on the recommendations of the Committee
- Meetings with the District Level Special Task Force of various Districts of State of Punjab, Haryana and Himachal Pradesh were held and various activates to be carried out by the various Task Forces to control pollution in river Ghaggar were discussed.

Based on the above data and spot inspections made by the Executive Committee, the State wise conclusions and recommendations are made as under:

3.5.1 State of Punjab

Conclusions and recommendations

1. The Executive Committee had visited 1 industry of district Patiala on 19.9.2019 and 2 industries of Dera Bassi area on 1.10.2019.The recommendations made in case of each industry were sent to Chairman, Punjab Pollution Control Board, vide no. 491 dated 14.10.2019 and no. 529 dated 1.11.2019, respectively, with the direction to take necessary action on the recommendations of the Executive Committee.

2. 30 towns have been identified, which are directly / indirectly discharging their sewage into River Ghaggar. For these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed.

3. The existing 21 STPs were monitored during September to November, 2019 to check their performance. The analysis data indicate that out of these 21 STPs, 03 STPs (Baretta, Bhiki and Sardulgarh) are not complying with the prescribed norms. Remaining 18 STPs were complying with the prescribed norms w.r.t. BOD, TSS and F.Coli parameters.

4. 8 STPs, are under construction and percentage of work done in these STPs varies between 8-20%. These STPs are expected to be completed by 31.7.2020.

5. 14 STPs are under planning and funds have been tied up for these STPs and these may be completed by 31.12.2020.

6. 2 STPs (Bhadson: 2 MLD, Sanaur: 4 MLD) are under planning but the funds are yet to be tied up. The Committee recommends that the Department of Local Government should make necessary arrangements for funds for these STPs and these may be completed by 31.12.2020.

7. Technology upgradation and funds are yet to be tied up for 4 STPs (Baretta: 3 MLD, Bhikhi : 3 MLD, Sardulgarh: 4 MLD and Mohali: 45.5 MLD). The Executive Committee recommends that the Department of Local Government shall make necessary arrangements for funds for these STPs and these may be upgraded by 31.12.2020.

8. Tendering process in case of 2 STPs of capacity 6 MLD (Patiala) and 1 MLD (Nabha) has been initiated by MES Patiala and is likely to be completed by 31.1.2021 and 31.3.2021, respectively. The Executive Committee recommends that urgent steps be taken to complete these STPs by 31.12.2020.

9. There is a gap of 69.7 MLD sewage in 30 towns, which is being discharged untreated (directly/indirectly) into river Ghaggar. The Department of Local Govt., Punjab shall make necessary arrangements for planning, designing and installation of new STPs to treat the gap in sewage by 31.12.2020.

10. During the period from September to November, 2019, 27 industries have been inspected by PPCB, out of which, bank guarantee in case of 3 industries, environment compensation in case of 2 industries, directions for closure under section 33-A of Water Act, 1974 in case of 4 industries have been imposed/issued. Action against 18 remaining industries is under process. The Executive Committee recommends as under:

    ✓ PPCB should increase frequency of regular inspections and surprise checkings of industries located in the catchment area of River Ghaggar to

ensure that the ETPs of industries are always in operation and should meet with the prescribed norms. These industries may not be allowed to discharge their treated / untreated wastewater into drains / nallah / choes / river Ghaggar.

- ✓ During the visit, Punjab Pollution Control Board shall compare the data shown by OCEMS with the actual analysis of the parameters to verify the authenticity of the data of OCEMS. Legal action may be initiated against the concerned industry in case any major difference in the data is observed.

11. 5 industries have been inspected by the District Level Special task Force during the period from September to October, 2019 and action against these industries under the provisions of the Water Act, 1974 is under process.

12. Data w.r.t water quality of river Ghaggar indicate that there is improvement in the water quality during the period January to October, 2019 w.r.t BOD and DO parameters and improvement w.r.t Total coliform parameter has been found at 5 locations out of total 14 locations of river Ghaggar.

In order to further improve the water quality in river Ghaggar, the Executive Committee recommends as under:

- ✓ Department of Local Government, other responsible agencies of the State and Punjab Water & Sewerage Board shall ensure that all the STPs shall be made operational at all the times and proper and adequate dose of disinfectant may be given at each STP to bring T.coli and F.coli parameters within prescribed norms. These departments shall ensure that all the STPs may achieve the stringent norms.
- ✓ PPCB shall continue to make surprise inspections to monitor the sewage treatment plants of the local bodies and action against the violating local bodies should be taken within 21 days from the date when the violations were observed.

13. All the Departments of State of Punjab shall ensure to comply with the directions given / recommendations made in each meeting of the Executive Committee so that the activities to be carried out to control pollution in River Ghaggar may be completed and commissioned within the time schedule.

14. The previous analysis study conducted by PPCB at 14 locations along the catchment area of river Ghaggar indicated that the values of calcium (3 locations), magnesium (3 locations) and hardness at 2 locations were found higher than the permissible limits and it was explained that it was due to geogenic reasons. The water quality analysis of these locations after monsoon season is yet to be carried out by PPCB.

The Executive Committee recommends that water quality analysis of river Ghaggar at 14 locations along river Ghaggar may be carried out by PPCB by 15.1.2020 for all the required parameters and in case any groundwater sample is found contaminated and is unfit for drinking purposes, such ground water source may be capped and a display Board mentioning that **"water is not fit for drinking"** may be placed at the contaminated source.

15. Irrigation schemes to utilize 43 MLD treated sewage of 9 towns for irrigation of agriculture fields have been implemented, which cater 1427 hectares of land.

2 irrigation schemes for utilization of treated sewage of the towns namely Khanauri (3 MLD: 70%) and Rajpura (7 MLD: 75%) are under construction and these are likely to be commissioned by 30.6.2020 and 31.5.2020, respectively. Under these irrigation schemes, 300 Hectares of agriculture land shall be irrigated.

For 4 towns (Mandi Gobingarh: 25 MLD, Patiala: 10 MLD, Dhuri: 5 MLD, Sangrur: 11 MLD, irrigation projects have been sanctioned to cater 1961 hectare of land. For the completion of these irrigation projects, time period of 10 to 20 months has been mentioned. However, the Executive Committee recommends effective steps be taken to complete these irrigation projects by 30.9.2020.

16. For 18 towns, irrigation projects have been prepared but the funds are yet to be tied up. The department of soil and water conservation shall take up the matter with department of finance, Govt. of Punjab to release funds for installation of irrigation projects.

17. The data provided by department of Soil and Water Conservation indicate that in 4 towns (Budhlada: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD and Dera Bassi: 4 MLD), irrigation projects are not feasible due to urbanized land and non availability of irrigation command area. Therefore, the Committee recommends that the department of Local Government/PWSSB shall make alternative arrangements such as use of treated sewage for construction activity, gardens and flushing purposes so that maximum quantity of treated sewage may be utilized.

18. Out of 28 villages, where STPs for treatment of sewage of villages were under construction, STPs for 20 villages have been completed and STPs for the remaining 8 villages are under construction. The Executive Committee recommends that these STPs may be completed by 31.3.2020.

19. During the months September to November, 2019, health checkup camps have been organized in the 4 districts namely Patiala, Mohali, Sangrur and Mansa, where 1037 patients were checked, out of which 15 patients were found suffered with water borne diseases. The Committee recommends that the

department of Health and Family Welfare shall continue to organize health check up camps in all the 4 Districts (Patiala, SAS Nagar (Mohali), Sangrur and Mansa) of the State, which are located in the catchment area of river Ghaggar.

20. PPCB shall ensure that all the remaining industries which have not installed Online Continuous Effluent Monitoring System (OCEMS), shall install and commission the same by 31.01.2020. These OCEMS shall have their connectivity with PPCB and CPCB server.

21. The department of Local Government, Punjab Water Supply and Sewerage Board, Department of Water Supply and Sanitation, Municipal Council / Corporations or any other concerned department, relating to operation and maintenance of existing sewage treatment plants, shall install CCTV cameras on all the STPs by 31.01.2020 and OCEMS by 31.03.2020.

22. PPCB has carried out information, education & communication (IEC) activities in all the 4 districts located in the catchment area of river Ghaggar. These activities were w.r.t management of the liquid and solid waste, compliance of provisions of Environment Acts, segregation and disposal of biomedical waste and E-waste management.

    The Executive Committee recommends that PPCB and other concerned department of the State of Punjab shall organize regular IEC activates for the awareness of the public.

23. To maintain environment flow in river Ghaggar, the Executive Committee recommends that the following directions be given to the concerned departments of State of Punjab.

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

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

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

iv) The Deptt. of Water Resource may explore the possibility of release of water from nearby canal to maintain the quality of the River.

v) PPCB shall install on line River Water Quality Monitoring Stations (RWQMS) at appropriate location by 30.06.2020

24. For Septage and Faecal sludge management, the Executive Committee recommends that the Deptt. of Rural Development & Panchayat and Municipal Councils may be directed to identify the sources of generation of septage and fecal sludge from rural and urban areas and a comprehensive plan to dispose of these materials in an environmentally sound manner be prepared in a time bound manner. Thereafter, there is need to identify and adopt low cost technology, which may treat the septage and fecal sludge before their discharge into the Environment.

25. For removal of solid waste from river Ghaggar and drains/Nallah falling into it, the Executive Committee recommends that PPCB and department of water resources shall jointly survey river Ghaggar and its tributaries and identify the stretches where the solid waste is found dumped. The survey may be completed by 31.03.2020 and these solid waste may be lifted by the responsible departments by 30.05.2020.

3.5.2 State of Himachal Pradesh

Conclusions and recommendations

1. Presently, no STPs is in operation in Parwanoo and Kala Amb area of Himachal Pradesh, which are located in the catchment area of Sukhna Nallah and River Markanda, respectively, which further lead for River Ghaggar.

2. 2 STPs, each of capacity 1 MLD, have been proposed to be installed in Parwanoo area. These may be completed by 31.12.2020.

3 One CETP-cum-STP of capacity 5 MLD has been proposed for Kala Amb area and the same may be completed by 31.12.2020.

4. One STP of capacity 1.5 MLD has been proposed for Trilokpur Area and same may be completed by 31.12.2020.

5. All the STPs should have a provisions of disinfection for ensuring control of fecal coliform as well as sludge digestion for converting sludge into manure.

6. Necessary measures shall be taken by Urban Development as well as Irrigation & Public Health Department of Himachal Pradesh to ensure that the generated sewage in the catchment of Sukhna Nallah, River

Kaushalya, River Markanda is intercepted and diverted to the existing STPs/ proposed STPs so that natural drains are restored and no sewage drains outfalls exists in future.

7. Proposed STPs for Parwanoo area, villages Trilokpur and Kheri and STP cum CETP for Kala Amb area shall be installed to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

8. All the treated sewage shall be utilized for flushing (in residential apartments, office, malls/commercial complexes), gardening, construction activity, irrigation purposes etc., and proposals shall be finalized in this regard by the State of Himachal Pradesh by 28.02.2020.

9. Dedicated drainage/sewerage network for carrying industrial effluent from industrial area of Kala Amb to the proposed CETP shall be laid or constructed and commissioned by 31.03.2020.

10. For utilization of treated sewage of the towns for irrigation, Departments of Irrigation and Public Health Engineering have submitted that it is difficult to utilize treated sewage for flushing, construction activity, irrigation etc due to topography of the area. However, Department of Irrigation and Public Health undertook to explore the feasibility of utilization of treated sewage in hilly areas on pilot basis. Most of the water polluting industries are using treated effluent from their STPs/ETPs for gardening and flushing etc.

11. As per data supplied by HPPCB, it has inspected 154 industries during the period September to November, 2019, out of which effluent samples of 15 industries have been collected and show cause notices have been issued to the violating industries. Environment Compensation amounting to Rs. 3.25 Lakh has been imposed on 3 units and directions for closure of 1 industry have been issued under the provisions of Water Act, 1974.

12. 9 Industries have been inspected by District Level Special Task Force. Action against the defaulting industries is under process.

13. Water quality of Sukhna Nallah monitored during April, 2019 to November, 2019 indicated that there is improvement w.r.t. parameters DO, BOD &F.Coli for the period September 2019 to November 2019 as compared to the analysis results for the period April, 2019 to June 2019.

14. Water quality of kaushalya river monitored during August, 2019 to November, 2019 indicated that there is improvement w.r.t. BOD and

T.Coli parameters in the analysis results for the period November, 2019 as compared to the analysis results of August, 2019.

15. Water quality of river Markanda was monitored during August, 2019 to November, 2019 and its analysis results indicate that the water quality of River Markanda has been degraded in the month of November, 2019 w.r.t parameters namely F.Coli and T.Coli due to discharge of untreated sewage of Kala Amb area.

16. Ground water samples have been collected from the area located along Sukhna Nallah. No contamination of ground water has been observed as per the lab analysis results available till date.

17. Presently, a pulp and paper mill, falling under 17 categories of Industries, has installed OCEMS at the outlet of its ETP and data is sent to the HPPCB. However, no CCTV camera has been installed on ETP by the industry so far. The Committee recommends that CCTV cameras should be installed by the industry at appropriate locations by 15.1.2020.

18. In Sukhna catchment area, Health camps are being organized by Department of Health & Family Welfare on monthly basis in Parwanoo area. 11 such camps have been organized by department of Health and Family welfare so far in Parwanoo area.

    Similarly in Markanda catchment area, 13 multi-specialty health camps have been organized. Health camp in the month of November was organized on 14.11.2019 in Village Johron, Kala Amb in which 130 patients were examined. Health camp in the month of December, 2019 was organized on 17.12.2019 at Village Moginand, Kala Amb in which 157 patients were examined.

19. To maintain Environmental flow in river/Nallah, following steps have been taken by HPPCB:

    - The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, have been installed in river Markanda near Vill Ogli, Kala Amb town. The system is being run on trial basis and calibration is being done.
    - The RTWQMS along with Radar system for water quality monitoring and flow measurement, respectively, has been installed in river Kaushalya near village Kamli. The parameters DO, BOD, TSS, pH, Temp and flow rate are being monitored and results of the same are being displayed at State Board server on real time basis.

20. For the management of septage and fecal sludge, following steps have been taken:

- Necessary directions have been issued to MC Parwanoo & BDO Dharampur to ensure that septage and fecal sludge is managed in a scientific manner.
- Show cause notice to the local authorities i.e. Member Secretary, SADA and Project Officer DRDA are being issued for higher values of BOD, T. Coli and F. Coli in Jattanwala Drain leading to Markanda River and further loading to river Ghaggar.

21. **For sludge management in catchment area of Nallah/drain further leading to River Ghaggar, following steps have been taken:**

- 1st cleanliness drive in Sukhna Nallah was organized on 02nd Oct, 2019 by HPPCB along with MC Parwanoo and PIA in the catchment area of Sukhna Nallah and more than 10 MT of solid waste was collected.
- 2nd cleanliness drive in the Sukhna Nallah was organised on 19th Oct 2019 by the HPPCB along with Forest Deptt, HPMC staff and MC Parwanoo, wherein, the solid waste dumping area near Village Ambota was cleared.
- HPSPCB also organized 04 no of cleanliness drives in the area in Parwanoo area in November, 2019 and the solid waste from drains / road was removed. Similarly, other industries have been motivated to adopt the area surrounding them to keep clean and green.
- Cleanliness drives were organized on 2 October, 2019 and 19 October, 2019 under "Swachhata Hi Seva" campaign in which around 5 MT of Waste was collected and disposed off to the Solid Waste Management Sites of MC Nahan and MC Paonta in Sirmaur District.

22. To create awareness through information, education & communication, following steps have been taken by HPPCB:

- Workshop on Comprehensive Environment Pollution Index (CEPI) was held for various industries in Parwanoo area under the chairmanship of Member Secretary, HPSPCB Shimla on 21.11.2019.
- Awareness program cum stakeholder's workshop was held with the staff of Microtek Group regarding compliance of Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, Environment Protection Act, 1986, Solid Waste Management Rules, 2016, Hazardous Waste Rules, 2016, Batteries Waste Rules, 2001, E-Waste

Rules, 2016, Noise Rules, 2000 and Plastic Waste Management Rules, 2016.

- HPSPCB is continuously carrying out mass awareness activities in Kala Amb area. A meeting on 19th November, 2019 was held under the chairmanship of Member Secretary, HPPCB with all the stakeholders in Kala Amb area to apprise them about pollution control norms to be achieved by them.

23. For watershed management, following steps have been taken by the various departments/agencies:

    - Workshop regarding Jal Shakti Abhiyan and Roof Top Harvesting at Common Facility Centre in Kala Amb Industrial Area **was** held on 01-10-2019.
    - Three industries namely M/s Akhil Enterprises, M/s Himsagar Labs Pvt Ltd, M/s Ruchira Printing and Packaging have agreed to connect their roof top drains with the dried borewells of IPH nearby their units.

24. HPPCB shall encourage only roof top rainwater harvesting by the industries.

25. HPPCB and other departments of the State of Himachal Pradesh shall comply with all the directions given / recommendations made in the meetings of the Executive Committee and action taken report be submitted to the Committee well in time.

3.5.3 State of Haryana

Conclusions and recommendations

1. The Executive Committee had visited 3 industries of district Panchkula on 19.11.2019. The recommendations made in case of each industry were sent to Chairman, Haryana State Pollution Control Board, vide no. 567 dated 5.12.2019 with the directions to take necessary action as per law.

2. In the State of Haryana, there are 62 existing STPs having total treatment capacity of 503.6 MLD. HSPCB has carried out performance of the 61 STPs in the month of May and September, 2019 w.r.t. BOD, TSS and F.Coli. parameters. The analysis results indicate that out of 61 STPs monitored during period. Under reporting, 9 STPs are not meeting with the BOD, TSS and F.Coli parameters. Rest of the STPs are meeting with BOD and TSS parameters. None of the STP is meeting with F.Coli parameter. The Executive Committee recommends that the concerned agencies of State of Haryana shall make necessary arrangements for addition of disinfection system in all

the STPs to ensure the achievement of F.coli parameter for all the times by 28.2.2020. The performance of other STPs, which are not meeting with BOD and TSS parameters, should be improved by 31.3.2020.

3. For treatment of gap in sewage quantified as 123 MLD in 17 towns, STPs for 6 towns have been completed to 100%. Progress w.r.t. STPs for 3 towns is very poor (2-5%). In rest of the STPs for 8 towns, the progress varies between 30-92%. These STPs should be completed by 30.6.2020.

4. Out of 32 STPs, which have been proposed to be upgraded, tenders have been floated in case of 11 STPs, work has been allotted in case of 11 STPs, DPRs/DNIT are under preparation in case of 8 STPs and land is not available in case of 2 STPs. The committee recommends that upgradation work in all the STPs shall be completed by 31.12.2020.

5. Proposed STPs, STPs under construction and upgradaton in the existing STPs shall be made to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Desh Pande Vs. Union of India & others.

6. For utilization of treated sewage of the towns for irrigation, pilot projects for STP Pehowa (1.47 MLD) catering 76 Hectares of land, STP Ladwa (1.22 MLD) catering 63 Hectares and STP Shahbad (3 MLD) catering 151 Hectares of land have been commissioned and the treated wastewater is being used for irrigation.

   For 4 STPs (Panipat HSVP:30 MLD, Panipat PHED:60 MLD, Karnal:50 MLD, Karnal (H&S): 18 MLD), irrigation schemes are under planning and these schemes shall cover the irrigation land measuring 12755 Hectares.

   The committee recommends that the Department of Irrigation, State of Haryana shall install and commission irrigation schemes to utilize the treated sewage of all existing STPs by 31.12.2020.

7. HSPCB through its Regional Offices has inspected 52 industrial units during October, 2019 to December 15, 2019, out of which 43 units were found non complying. Out of these 43 non complying units, 16 industries have been issued closure orders under the provisions of the Water Act, 1974 and show cause notices have been issued to remaining 27 industries. The committee recommends that HSPCB shall increase its surveillance by surprise checking or through Environment Protection Squads and shall ensure that every industry located in the catchment area of River Ghaggar should be visited at least once in a quarter.

8. No inspection has been carried out by District Level Special Task Force. Therefore, the committee recommends that this District Level Special Task Force should also visit the industries and other polluting sources falling in the respective Districts. The action against the defaulting industries should be taken as per the provisions of the Water Act, 1974.

9. Water Quality of river Ghaggar before and after confluence of pollution source into river Ghaggar at 45 locations including pollution sources has been monitored and the analysis results indicate that no significant improvement w.r.t. BOD and TSS parameters has been observed. Moreover, during monitoring of river Ghaggar water, F.coli parameter has not been analyzed.

   Therefore, the Executive Committee recommends that the State of Haryana shall install new STPs and upgrade the existing STPs by 31.12.2020 so that water quality in river Ghaggar may be improved.

10. Ground water quality of water sources existing along the catchment area of river Ghaggar has been carried out in the towns namely Panchkula, Ambala, Jind, Kaithal, Sirsa and Fatehabad and 165 ground water samples were analyzed, out of which 64 samples were found non complying the standards. Therefore, the committee recommends that **HSPCB shall ensure that the groundwater sources which have been found contaminated may not be allowed to be used for drinking purposes and display boards mentioning that groundwater source is not fit for drinking purposes**.

11. Out of total 62 STPs, CCTV cameras have been installed on 57 STPs and CCTV on the remaining STPs shall be installed by 31.3.2020. With regard to installation of OCEMS on STPs, it has been reported by HSPCB that OCEMS on 56 STPs have been installed. On the remaining STPs, OCEMS shall be installed by 31.3.2020.

    With regard to installation of CCTV cameras and OCEMS by the industries as prescribed by CPCB, these systems may be installed by the industries by 31.3.2020.

12. 108 Health checkup camps in the habitation area along river Ghaggar were organized from January, 2019 to October, 2019 and in these camps, 7167 patients were examined, out of which 657 patients were diagnosed to be suffering from Gastrointestinal diseases, which was 9% of total patients. The committee recommends that HSPCB shall check the ground water quality of that particular area. In case the ground water source is found unfit for human consumption, the same may not be allowed to be used by the public for drinking purposes and it should be notified immediately to reduce the disease burden.

13. In order to treat the sewage of villages located in the catchment area of river Ghaggar, 7 villages have been identified in Distt. Fatehabad, 6 villages in Distt. Panchkula and 11 villages in Distt.Sirsa. The Department of Panchayat of the State shall either divert the sewage of villages to the nearby existing STP or shall evolve suitable technology to treat the sewage of villages so that these STPs may be completed by 31.12.2020.

14. Regarding maintaining Environmental Flow to be maintained in river Ghaggar or its tributaries, the State of Haryana has claimed that Ghaggar river is not a perennial river and its discharge varies between zero to maximum during flood seasons. About 15-20% of the lowest possible discharge in the lean season is required for maintaining E-flow. The State of Haryana has claimed that since the discharge of river Ghaggar varies from zero to maximum, therefore, maintaining E-flow in the river is not possible.

15. Regarding removal of solid waste from the stretches of River Ghaggar and its tributaries, no identification of any stretch or area in river Ghaggar has been made so far. Therefore, it is recommended that HSPCB and Department of Irrigation of State of Haryana shall jointly identify the stretches of River Ghaggar and its tributaries, where the solid waste is lying dumped and the same shall be removed by 31.03.2020.

16. For septage and Faecal Sludge Management, following steps have been taken by State of Haryana:

- Municipal Corporation, Gurugram is doing the disposal of sewage through tankers in Gurugram in some areas. Municipal Corporation, Gurugram has made septage management policy and Urban Local Body (ULB) has given directions to other Municipalities vide their letter dated 23.07.2019 to frame their policy for septage management as per their local conditions adopting the policy of MC, Gurugram.

  The Executive Committee recommends that the concerned departments of State of Haryana shall identify the rural area and others areas, wherever, septage and fecal sludge is generated by 28.02.2020 and their management in environmentally sound manner be made by 31.05.2020.

17. The Deptt. of Urban Local Body, HSPCB and other concerned departments shall comply with the direction given / recommendations made during the meetings taken by the Executive Committee and action taken report be submitted to the Committee well in time

3.5.4 U.T. Chandigarh

Conclusions and recommendations

1) For the treatment of sewage of localities/areas covered under U.T., Chandigarh, 6 STPs of total treatment capacity of 242.3 MLD are in operation. The performance of these STPs carried out by CPCC during the months May to November, 2019. The performance study indicates as under:

- The data w.r.t. STP Raipur Khurd indicates that there is improvement w.r.t. TSS and BOD parameters but no improvement w.r.t. F.coli parameter.
- The monitoring of 3 BRD STP indicates that though the values of BOD and TSS are within the prescribed norms of BOD: 30 mg/l, TSS: 100 mg/l but the performance of STP has been degraded. Also, there is no improvement w.r.t F.Coli parameter.
- In case of Raipur Kalan STP, there is improvement w.r.t BOD parameter. The value of TSS is within the norms. No improvement w.r.t F.Coli parameter has been observed.
- Dhanas STP data indicate that though the values of BOD and TSS are within the prescribed norms of BOD: 30 mg/l, TSS: 100 mg/l but the performance of STP has been degraded. There is no improvement w.r.t F. Coli parameter.
- In the case of Maloya STP, the values of BOD and TSS are within the prescribed norms. No improvement w.r.t F. Coli parameter has been observed.
- STP Diggian data indicate that the value of BOD and TSS are within the prescribed norms of BOD: 30 mg/l and TSS: 100 mg/l. No improvement has been observed w.r.t F. Coli parameter.

  The Executive Committees recommends that Municipal Corporation, Chandigarh shall make adequate arrangements for disinfection of treated sewage so that value of F.Coli parameter may be brought within the norms. The necessary arrangements may also be made to improve the performance of STPs.

2) As per CPCC data, total discharge of sewage of Chandigarh is 243 MLD and 6 STPs of capacity 242.3 MLD are in operation. Therefore, there is a gap of only 0.7 MLD, which is to be treated by the Municipal Corporation, Chandigarh. Thus, to treat the balance quantity of wastewater, STP of capacity 2 MLD has

been proposed to be set up in Kishangarh area to meet with the latest stringent norms. The STP is likely to be completed by November, 2021. However, the Executive Committee recommends that the proposed STP may be completed and commissioned by 31.12.2020.

3) For upgradation of existing STPs to meet the latest and stringent norms, the tenders for up gradation of these STPs stand opened and technical evaluation is under process. The Executive Committee recommends that upgradation work of the existing STPs, to meet within the stringent norms, may be completed by 31.12.2020.

4) Proposed STPs and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Desh Pande Vs. Union of India & others.

5) In order to utilize the treated sewage for irrigation, it has been reported by CPCC that there is no adjoining agriculture fields near Chandigarh where the treated sewage may be utilized for irrigation. Therefore, presently, the treated sewage is being used for gardening of various gardens/parks and golf course. The treated sewage is also supplied to houses for gardening purposes. However, after the upgradation of the existing STPs, the maximum quantity of treated sewage may be utilized for construction, gardening and other useful purposes.

6) In order to monitor the performance of effluent treatment plants of the industries, CPCC has inspected 12 industries in October, 2019 and 20 industries in November, 2019, out of these 32 industries, 15 industries were found non complying and show cause notices to these industries have been issued.

The Executive Committee recommends that CPCC shall increase its surveillance by conducting surprise inspection and forming a Environment Protection Squad. Regular check on operation of effluent treatment plants of the electroplating industries may be made as these are the source of discharge of toxic effluent into sewerage system leading to Sukhna Choe and N-Choe further leading to River Ghaggar.

7) District Level Special Task Force has not inspected any industry during the months of October to December, 2019.

The Executive Committee recommends that DLSTF shall also carry out inspection of industries and other pollution sources and action against the defaulting industries be recommended to CPCC.

8) The water quality data of river Ghaggar monitored at various points for the period October, November and December, 2019 has been compared with the data for the period May, June and September, 2019 and it has been observed that there is improvement in the quality of river Ghaggar water w.r.t. DO, BOD, COD and TSS parameter and but no improvement w.r.t. F.coli parameter. Therefore, the Executive Committee recommends that suitable arrangements by the Municipal Corporation, Chandigarh shall be made to disinfect the treated sewage of STPs to bring the F.coli parameter within the prescribed norms.

9) The groundwater quality monitoring data for the period July to October, 2019 of ground water sources, falling in the catchment area of river Ghaggar, indicate that all the parameters are within the prescribed norms except calcium and magnesium, which have been mentioned due to geogenic reasons.

10) With regard to installation of OCEMS and CCTV cameras on STPs by the Municipal Corporation, Chandigarh, the committee recommends that these systems on all the existing 6 STPs may be installed by the Corporation by 31.03.2020.

11) Regarding closing of sewage outlets directly falling into Sukhna Choe and N-Choe, further leading to river Ghaggar, it has been observed as under:

- Presently, out of 13 outlets, falling in Sukhna Choe, 9 outlets have been plugged / diverted to sewerage system and remaining 4 outlets shall be closed by 31.01.2020.
- Out of 15 outlets, falling into N-Choe, 12 outlets have been plugged/ diverted to sewerage system and remaining 3 outlets shall be closed by 31.01.2020.

12) Regarding maintaining the Environmental flow (E-flow), it has been observed that River Ghaggar flows far away from Chandigarh area. Moreover, Sukhna choe and N-Choe, are non-perennial drains. As such, maintaining of Environmental Flow (E-flow) is not possible in case of Chandigarh area.

13) With regard to removal of solid waste from the stenches of River Ghaggar and its tributaries, it has been reported by CPCC that municipal solid waste is being lifted from whole of Chandigarh. No solid waste is being dumped along the drains or otherwise and in case any solid waste is dumped, the same is removed by the Municipal Corporation, Chandigarh at the earliest.

14) For septage and fecal sludge management, it has been mentioned by CPCC that Chandigarh is fully covered with sewerage network and there are no

septic tanks allowed in Chandigarh, resulting in no generation for septage and fecal sludge. However, CPCC and M.C., Chandigarh shall identify, the areas (if any) where online sanitation systems have been provided so that plan for management of septage and faecal sludge may be prepared.

15) CPCC and Municipal Corporation, Chandigarh shall comply with all the directions given / recommendations made by the Executive Committee during its meetings (monthly meeting) with the officers of U.T., Chandigarh.

Dr. V.K Hatwal **Dr. Babu Ram** **J.C Babu**

Ms. Urvashi Gulati

Justice Pritam Pal
Former Judge
Punjab & Haryana High Court

Annexure-1

Item Nos. 01& 02 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No.138/2016 (TNHRC)
(Case No.559/19/11/14)

In Re: News item in the Tribune dated 12.05.2014 captioned: Stench Grips Mansa's Sacred Ghaggar River

Date of hearing: 22.11.2019

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

For Respondent(s): Mr. Shubha Bhalla, Advocate for Chandigarh PCC
Ms. Saloni Jain, Advocate for Punjab PCB
Mr. Rahul Khurana, Advocate for State of Haryana and Haryana State PCB
Mr. Rajkumar, Advocate for CPCB

ORDER

Particular	Paragraphs
Introduction – the issue and the background till passing of order dated 07.08.2018	1-3
Order of Tribunal 07.08.2018 constituting Executing / Monitoring Committee headed by Justice Pritam Pal, former Judge of Punjab and Haryana High Court to oversee execution of plan to prevent and remedy pollution of river Ghaggar and submit reports to this Tribunal	4
Proceedings on the issue of remediation of polluted river stretches generally	5
Reports of the Justice Pritam Pal Committee and earlier orders of this Tribunal thereon: a. Report dated 28.02.2019: • Gaps in sewage generation and management – para 7 • Water quality of the river and its tributaries – para 8 • Status of functioning of STPs – para 9 • Ground water quality – para 11 • Conclusions and recommendations – para 12 b. Order of the Tribunal dated 11.04.2019 – para 13 c. Report dated 14.06.2019 • Status of proposed STPs and with timelines – State of Punjab, Himachal Pradesh, UT Chandigarh and Haryana – para 14 d. Report dated 01.10.2019 • Status of performance of existing STPs and proposed STPs – State of Punjab, UT	6-16

102

Introduction – the issue and the background till passing of order dated 07.08.2018

1. This order is being passed in continuation of order dated 11.04.2019 on the subject of effective steps for making Ghaggar river pollution free. The river originates in the State of Himachal Pradesh and ends in the State of Rajasthan. The river is included by the Central Pollution Control Board (CPCB) in 351 polluted river stretches of the country in priority – I category, which is a category of highest pollution, having BOD more than 30 mg/l as against the prescribed standard of 3mg/l. The issue of control of pollution in all the said 351 river stretches is also being dealt with generally by this Tribunal in *O.A. No. 673/2018*. The present matter however involves a specific polluted river stretch.

2. Proceedings in this matter were initiated before this Tribunal on a reference received from the National Human Rights Commission (NHRC). The NHRC took Suo-Motu action on the basis of a news item appearing in 'The Tribute' dated 12.05.2014 under the caption "*Stench Grips Mansa's Sacred Ghaggar River*" to the effect that the river Ghaggar had turned into a polluted water body on account of discharge of effluents - industrial as well as municipal. The NHRC considered the matter in the light of reports from the States of Punjab and Haryana as well as the State of Himachal Pradesh. Vide letter

dated 17.03.2016, the NHRC sent the record of the matter to this Tribunal.

3. Pursuant to the order of this Tribunal dated 09.12.2016, a joint inspection was carried out by the representatives of the Central Pollution Control Board, Punjab State Pollution Control Board, Haryana Pollution Control Board, Himachal Pradesh State Pollution Control Board. Officials of Union Territory, Chandigarh also joined the said inspection team. The findings of the joint inspection report showed that values of various parameters such as BOD, TSS, Feacal Coliform, Lead and Iron were beyond permissible limits at most of the locations in Himachal Pradesh, Haryana, Punjab and Chandigarh.

Order of Tribunal 07.08.2018 constituting Executing / Monitoring Committee headed by Justice Pritam Pal, former Judge of Punjab and Haryana High Court to oversee execution of plan to prevent and remedy pollution of river Ghaggar and submit reports to this Tribunal

4. The matter was reviewed vide order dated 07.08.2018 and noticing failure of the Regulatory Authorities in taking remedial steps by way of prevention of pollution and proceeding against the polluters, the Tribunal directed constitution of a Special Task Force (STFs) at the District level as well as at the State level. The State level STF was to be headed by Chief Secretary. The Tribunal directed preparation of action plans with firm timelines so as to ensure that water quality is as per norms within the targeted time. The Tribunal also constituted an Executing Committee, under Section 25 of the National Green Tribunal Act, 2010, headed by a former Judge of Punjab and Haryana High Court, Justice Pritam Pal. The Executing Committee was to furnish an interim report to this Tribunal. Accordingly, report dated

28.02.2019 under the cover letter dated 01.03.2019 was received and considered on 11.04.2019.

Proceeding on the issue of remediation of polluted river stretches generally

5. The issue of 351 polluted river stretches was taken up by this Tribunal vide orders dated 20.09.2018, 19.12.2018 and 8.04.2019, in O.A. No. 673 of 2018. On 20.09.2018, the concerned States were required to constitute River Rejuvenation Committees (RRCs) to prepare action plans to make polluted river stretches pollution free. The action plans were to be submitted to CPCB. The matter was further reviewed on 19.12.2018 and thereafter. The matter is now fixed for 29.11.2019. This issue was also subject matter of consideration in order dated 16.01.2019, in Original Application No. 606 of 2018, which pertained to compliance of Municipal Solid Waste Management Rules. This Tribunal directed the Chief Secretaries of all the States to appear in person before this Tribunal after acquainting themselves with the progress not only on the issue of solid waste management but also other significant issues, including the subject of polluted river stretches. Accordingly, Chief Secretaries of Himachal Pradesh, Haryana, Punjab and Advisor to Administrator, Chandigarh appeared on 05.03.2019, 06.03.2019, 07.03.2019 and 26.03.2019 respectively and filed their reports which also included reports on the issues of polluted river stretches. The Tribunal directed the Chief Secretaries to continue to monitor the subject and furnish quarterly reports. Reports were also furnished by RRCs to CPCB which matter was dealt with by the Tribunal on 08.04.2019 and by subsequent orders.

Reports of Justice Pritam Pal Committee:

a. Report dated 28.02.2019

6. As already mentioned, the present matter was last reviewed on 11.04.2019 in the light of the report of the Executing Committee dated 28.02.2019. The core issues considered included remedying the gap with regard to the sewage generation and management, preventing discharge of untreated industrial and municipal effluents and discharging of solid waste.

Gaps in sewage generation and management

7. Gap in report of sewage management, as per report dated 28.02.2019 of the Executing Committee, was found to be as follows:-

(i) Himachal Pradesh – Parwanoo and Kala Amb

The gap for Parwanno is 569.414 KLD
The gap for Kala Amb is 1046.24 KLD

(ii) With regard to Chandigarh the gap is 23.225 MLD
(iii) With regard to Punjab the gap is 75.92 MLD
(iv) With regard to Haryana the gap is 42.9 MLD

Water quality of the river and its tributaries

8. With regard to the challenge posed by uncontrolled discharge of untreated industrial effluents, deficiencies in solid waste management, bio-medical waste management and hazardous waste management in the State of Himachal Pradesh, Haryana, Punjab and UT Chandigarh, it was found that the samples of water taken from the rivers did not comply with the water quality criteria. The status of water samples was found to be as follows:-

"River Markanda

- *Dissolved Oxygen which is in the order of 8-12 mg/l and complying to the water quality criteria for bathing at the monitored locations.*

106

- *BOD is in the order of 1-3 mg/l and is complying with the water quality criteria for bathing at the monitored locations.*

- *Faecal Coliform is in the order of 33000 to 70000 MPN/100ml and is not complying with the water quality criteria for bathing at the monitored locations.*

Therefore, based on the measured values at the sampling locations, river Markanda is not complying to the water quality criteria for bathing.

River Kaushalaya

- *Dissolved Oxygen concentration at the monitored location is observed as 7.8 mg/l and complying to the water quality criteria for bathing at the monitored location.*

- *BOD is observed as 2 mg/l and is complying with the water quality criteria for bathing at the monitored location.*

- *Faecal Coliform is observed as 11000 MPN/100ml and is not complying with the water quality criteria for bathing at the monitored locations.*

Therefore, based on the measured values at the sampling location, river Kaushalya is not complying to the water quality criteria for bathing

River Ghaggar

- *Dissolved Oxygen content is in the order of 0.3 to 7.6 at all the 14 sampling locations. 11 out of 14 sampling locations are not complying to the water quality criteria for bathing.*
- *BOD is in the order of 2-94 mg/l and 13 out of 14 sampling locations are not complying with the water quality criteria for bathing. Highest BOD of 94 mg/l is observed after confluence of Patiala drain/nadi.*

- *Faecal Coliform is in the order of 200 to 3,40,000 MPN/100ml and is not complying with the water quality criteria for bathing at 9 out of 13 monitored locations.*

Therefore, based on the measured values at the sampling locations, river Ghaggar is not complying to the water quality criteria for bathing.

Drain Samples

The analysis results of the drain samples for analyzed parameters reveal that

- *TSS is in the order of 30 -612 mg/l whereas TDS is observed as 120 to 6060 mg/l and highest TSS and TDS observed at Patiala drain and Derabassi drain respectively.*
- *COD is in the order of 30 - 6741 mg/l and highest COD is observed at Derabassi Drain;*
- *BOD is in the order of 6- 2000 mg/l and highest BOD is observed Derabassi Drain*
- *NH3-N is in the order of 3-89 mg/l and highest Ammonical Nitrogen is observed at Patiala drain."*

Status of functioning of STPs

9. The details of functioning of STPs was found to be as follows:-

"<u>With regard to Chandigarh</u> –

The analysis results of the treated sewage from the sewage treatment plants for the period January 2019 reveals that the observed values of the 3 out of 5 STPs located at Khurd, Diggian and Raipur Kalan are observed in the order of 59-69 mg/l, 51-58 mg/l, 59-70 mg/l and the measured values w.r.to BOD is not complying to the prescribed parameter. Also, all the treated sewage is having Faecal Coliform more than 1000 MPN/100 ml which may be due to improper disinfection. Therefore, all the existing STPs require upgradation.

<u>With regard Punjab</u> -

- *As observed during the visit, 02 out of the 20 STPs are not in operation.*
- *Treated sewage from all the 18 STPs is complying with the parameters viz., pH and TSS.*
- *0 9 out of 18 STPs inspected are not complying to the Faecal Coliform, which may be due to improper disinfection.*
- *In 18 STPs, BOD content in the treated sewage was observed to be in the order of 7 to 61 mg/l and 05 STPs located at Bhikhi, Budhlada, SAS Nagar, Sardulgarh and Patiala are not complying to the treated sewage discharge norms with respect to BOD.*
- *Faecal Coliform content in all the 18 inspected STPswas observed to be in the order of 780 to330 MPN/100 ml and 09 STPs are not complying to the norm w.r.to Faecal Coliform.*
- *STPs located at Bhikhi, Budhlada, SAS Nagar, Sardulgarh and Patiala are not complying to both the parameters such as BOD and Faecal Coliform.*
- *Total STPs Complying = 09; Total STPs Non Complying = 09*

108

With regard Haryana –

BOD content is observed in treated sewage samples of STP, Urban Estate, Ambala Cant (52 mg/l); STP, Baldevnagar, AmbalaCitty (56 mg/l); STP, Devinagar, Ambala (64 mg/l); STP, PHED Industrial Area, Jind (110 mg/l), STP at Debwali, Sirsa (36 mg/l) and STP, Vill, Amani, Fatehbad (56 mg/l) i.e., 06 out of 53 STPs monitored are having BOD more than 30 mg/l and afore-said STPs are not complying to the treated sewage discharge norms which may be due to improper operation of these STPs."

10. Sludge characteristics were found to be as follows :-

"Based on the analysis results of the sludge samples collected from 07 STPs in the catchment of river Ghaggar concluded that the sludge of all the said STPs is not fit for use as manure especially for food based crops and may be used for greenery."

Ground water quality

11. Ground water quality was noted to be as follows:

"**Himachal Pradesh**

The analysis results of the collected 57 water samples reveals that 05 out of 57 samples are not complying with respect to TDS (> 500 mg/l), 18 out of 57 samples w.r.to Total Alkalinity (200 mg/l), 2 out of 57 samples w.r.to Fluoride (> 1 mg/l), 05 out of 57 samples w.r.to Total Hardness (> 200 mg/l) as well as Iron content(> 0.3 mg/l) when compared with the drinking water standards prescribed under IS10500-2012.

Chandigarh

The analysis results of the collected 7 water samples reveal that

- *Pre - monsoon samples are not complying when compared with the drinking water standards prescribed under IS10500-2012 with respect to*
  - *NH3-N at ground water samplings locations located at Sector-15, Village Palsora*
  - *Turbidity at ground water samplings locations at DaduMajra, Sector-25, Sector-22, Village Palsora, Dhanas and Sector-35*
  - *Total Alkalinity at ground water samplings locations at Dadu Majra, Sector-25, Sector-22, Village Palsora, Dhanas, Sector-20 and Sector-35*
  - *TDS at ground water samplings locations Sector-15 and Village Palsora;*
  - *Faecal Coliform at ground water samplings locations at Dadu Majra and Dhanas.*
- *Post-monsoon samples are not complying when compared with the drinking water standards prescribed under IS10500-2012 with respect to*

- *NH3-N at ground water samplings locations located at Dadu Majra, Sector-21, Village Palsora, Dhanas, Sector-20 and Sector-35;*
- *Turbidity at ground water samplings locations at Dadu Majra, Sector-15, Village Palsora, Dhanas, Sector-20 and Sector-35;*
- *Total Alkalinity at ground water samplings locations at Dadu Majra, Sector-15, Village Palsora, Dhanas, Sector-20 and Sector-35*
- *TDS at ground water samplings locations Dadu Majra, Sector-15, Sector-35 and Village Palsora;*
- *Faecal Coliform at ground water samplings locations at Sector-22 and Village Palsora.*

Punjab

As per directions of Executing Committee, the Punjab Pollution Control Board has carried out ground water sampling at 79 locations in and around 62 industries (in some industries, more than one sample was drawn) to ascertain the quality of ground water in respect of parameters such as fluoride, sulphate, cadmium, copper, lead, nickel, zinc, arsenic, mercury and oil & grease. Out of these, 71 samples were found conforming to the prescribed standards as laid down in IS: 10500 – 2012. In 8 samples, the concentration of either fluoride or sulphate or both was found beyond the prescribed standards. The Board will take necessary action and monitor the quality of ground water regularly and the same will be reviewed at the district and state level.

Haryana

The industries found indulged in reverse pumping are closed and power of closure has already been delegated to the Regional Officers of HSPCB. Further, the STFs have also been directed to close down the contaminated sources of drinking water and also place sign boards nearby the respective contaminated source regarding "Water is not fit for Drinking purpose". The monthly action taken reports are being sought in this regard from District Level Task Forces constituted in this matter by the State Government.

The Committee is also of the view that the technology available, can also be used for the surveillance of the industries located in the catchment area of river Ghaggar by all the concerned States in order to assess illegal discharge by the industries."

Conclusions and recommendations

12. The conclusions of the Committee and recommendations were noted as follows:-

"During the water sample collection by the Executing Committee, at most of the places river Ghaggar is having highly coloured wastewater might be due to discharge of industrial effluent likely from Paper & Pulp Industries, Sugar and Distilleries as

these industries have not been insisted for removal of 'colour' under Consent mechanism by the respective States and not having strict vigilance by the respective State Pollution Control Boards.

Considering depletion of groundwater resources, Government of Punjab should take a policy decision with regard to the supply of meter water to the public as per the demand or supply prescribed under the guidelines issued by Ministry of Urban Development.

Also, policy with regard to the utilization of treated sewage for beneficial use which include agriculture, construction activity and green development so as to reduce abstraction and consumption of the ground water resources should be implemented and promoted.

Also, all the industries located in the catchment of river Ghaggar should be allowed to use ground water abstraction for commercial use only with the approval of the Central Ground Water Authority and such industries also be suggested to explore alternate water supply sources (including adoption of low water consuming technologies) without depending on the natural ground water resources.

All the existing STPs should be insisted upon to obtain Consent under Water (Prevention and Control of Pollution) Act, 1974 from the Punjab Pollution Control Board, with immediate effect.

Therefore, Punjab Government should bring all the STPs under one authority so that it becomes easy for planning, commissioning and for ensuring proper operation and maintenance of the existing or upcoming STPs.

Government should allocate adequate budget for management of sewage in the State and this allocated budget should be released as and when required. Periodic training of all the officials i.e., O & M Staff, field staff or supervisors of the concerned departments involved in operation of the STPs should be organized by PPCB in association with the reputed organizations such as NEERI, Nagpur or NPC, Delhi or IITs.

All the existing STPs should also be connected with electromagnetic flow meters at all the salient points (i.e., inflow, at the bye-pass arrangement, after treatment and before discharge of treated water within the STPs) and proper records maintained. Also, STPs also be connected with continuous online effluent monitoring system for monitoring of prescribed parameters including discharges with a provisions of CC Cameras and real time data also be displayed at the entrance of the STPs and also transferred to the servers of PPCB and CPCB.

Therefore, all the STPs should have a provision of uninterrupted power supply or DG Set of adequate capacity for ensuring proper treatment of sewage during power failures.

111

All the parameters of the treated sewage may be get analyzed as per the frequency prescribed by the States through any laboratory approved under the E (P) Act, 1986 or NABL approved laboratory.

All such drains should be restored by properly designed sewerage network connectivity (including interception and diversion of sewage from the drains to the existing STPs or upcoming STPs), for ensuring proper treatment of generated sewage to comply with the discharge norms and thereafter only such treated sewage may be discharged into the drains as a part of maintaining the E-flows.

All such existing STPs should be upgraded for ensuring compliance to the effluent discharge norms notified under the Environment (Protection) Act, 1986.

Also, the option of 'Sludge Digester' as a part of STP be created for methane recovery and such generated sludge from the sludge digester may be used as manure and STPs shall ensure that at any instance the generated STP sludge should not be disposed of in river system.

All upcoming STPs preferably should have standby arrangements atleast for two days as a part of the upcoming STPs.

Therefore, Pollution Control Boards are required to prescribe PETP Standards for all the CETPs located in the catchment of river Ghaggar and in the respective States.

In addition to the action plans prepared by the respective Governments, following action plans also need to be included with timelines:

Development of Bio-diversity parks in the catchment of river Ghaggar.

Watershed management and maintaining E-flows in the river Ghaggar and its tributaries for maintaining biological system of the water body.

Evolving and Effective Implementation of Sand Mining Policy of the Governments.

Dredging and maintenance of all the drains contributing to river Ghaggar pollution and proper disposal of the sludge generated from the dredging and maintenance of the drains.

Restoration of all the drains as natural drains for carrying only storm water;

Provision of measurement of flows in all the drains before its outfalls in to the river Ghaggar or its tributaries in all the States to know the contribution of discharges into the river Ghaggar or its tributaries and records shall be maintained by the concerned departments in order to evolve further strategies if required.

112

Installation of real time water quality of monitoring stations at all the outfalls of the drains and at the salient points of the river Ghaggar or its tributaries and display of such data in public domain, by all the concerned State Governments.

Interception of diversion of wastewater from the drains (not meeting to the water quality criteria), to the nearby STPs or CETPs for ensuring further treatment to comply with the discharge norms.

Septage management in the catchment areas of river Ghaggar and its tributaries for beneficial use including irrigation, construction activities."

Directions in order dated 11.04.2019

13. The Tribunal directed action to be taken by the Himachal Pradesh, Haryana, Punjab and UT Chandigarh to be monitored by the Chief Secretaries and required a further report from the Executing Committee with reference to the status on the ground after six months or as and when considered necessary by the Committee.

Report dated 14.06.2019

14. Interim report dated 14.06.2019 was filed. Status with regard to sewage management was reported to be as follows:

9.1 State of Punjab:

"9.1.2 Status of proposed 23 STPs to be installed w.r.t. timelines

Sl. No.	Name of the Town	STPs required	Installed	Proposed	Timelines proposed as per Action Plant
1	Ghanour	01	-	2 MLD	• DPR approved. • Tendering by 31.07.2019. • Commissioning – 31.10.2020
2	Sonour	01	-	4 MLD	• Land yet to be identified.
3	Bhadson	01	-	3 MLD	• DPR approved
4	Nabha	01	-	12 MLD	• DPR approved
5	Sangrur	02	-	4 MLD	• 31.07.2020
6	-	-	-	11 MLD	• 31.12.2020
7	Dhuri	02	-	5 MLD	• 31.12.2020
8	-	-	-	6 MLD	• 31.12.2020
9	Longowal	01	-	3 MLD	31.10.2020
10	Cheema	01	-	2 MLD	31.10.2020

113

11	Gholumajra Village	01	-	0.3 MLD	31.12.2020
12	Chaundhari & Samal heri Village	01	-	0.3 MLD	31.12.2020
13	Sirhind	03	-	2 MLD, 4 MLD & 5 MLD	31.07.2020
14	Lalru	03	01	1 MLD at Deparlalru	31.10.2020
15	-	-	-	1.5 MLD at LalruMandi	Under legal litigation for change of land
16	Issapur and Mirpur Village	01	-	2 MLD	31.10.2020
17	Mubarkpur Village	01	-	2 MLD	31.10.2020
18	Amloh	01	-	3 MLD	31.12.2020
19	Bassi Pathana	01	-	3 MLD	31.07.2020
20	Cheema	01	-	2 MLD	31.10.2020
21	Boha	01	-	2 MLD	31.07.2020

9.1.3 Up-gradation of existing STPs

Sr. No.	Name of the Town	STPs required	Installed	Timelines for up gradation
1	Patiala	3	3	Up-gradation of 46 MLD STP to 61 MLD by 31.01.2021
2	Baretta	1	1	31/12/2020
3	Bhikhi	1	1	31/12/2020
4	Sardhulgarh	1	1	31/12/2020

9.2 State of Himachal Pradesh:

9.2.1 Performance status of existing STPs

- No STP exists in Kala Amb and Parwanoo area which are located on catchment area of River Ghaggar.

9.2.2. Status of proposed 3 STPs to be installed w.r.t timelines

Sr. No.	Name of the Town	STPs required	Installed	Proposed	Timelines proposed As per Action Plan	Remarks
1.	Kala Amb	CETP-cum-STP	-	5 MLD	31/01/2022	-

2.	Parwanoo	2	-	1 MLD each		• Land for one STP identified. • No Identification for second STP.

U.T. Chandigarh:

9.3.2. Status of proposed 2 STPs to be installed w.r.t timelines

Sr. No.	Name of the Town	Proposed	Timelines proposed as per Action Plan
1.	Raipur Kalan	9 MLD	30/06/2019
2.	Kishangarh	1.8 MLD	30/11/2021

State of Haryana:

4.2. Status of proposed 14 STPs to be installed w.r.t timelines

Sr. No.	Name of the Town	Proposed STP (in MLD)	Timelines proposed as per Action Plan
1.	Barara	4	31.10.2019
2.	Jind	7	30.11.2019
3.	Sec-6, Urban Estate, Thanesar	15	31.03.2020
4.	Sec-21 Urban Estate, Ambala City	5	31.12.2019
5.	12 Cross Road	12	30.11.2019
6.	Village Nagal	12	30.11.2019
7.	Khagesara & Taka	0.5	31.12.2019
8.	Nangal & Allipur	0.5	31.12.2019
9.	Khatoli	0.75	31.12.2019
10.	Kot	0.75	31.12.2019
11.	Sukhdarshanapur	0.75	31.12.2019
12.	Ramgarh	1	31.12.2019
13.	Tipra (Khanguwala)	1	31.12.2019
14.	Village Dabra	8	31.03.2020

Report dated 01.10.2019

15. Further report dated 01.10.2019 has been filed, in continuation of which is subject matter of consideration today. The Committee carried out inspection of various units with a view to check status of

115

discharge of untreated effluents as well as of STPs. Such status is duly reflected in the comprehensive report of the Committee.

12.1 State of Punjab:

12.1.1 Performance of existing Sewage treatment plants

30 towns have been identified, which are directly/ indirectly discharging their sewage into river Ghaggar. In these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed and are in operation. The performance status of these 21 STPs is as under:

Sr. no.	***Name of the Town***	***Capacity of STP***	***Performance w.r.t. parameter BOD and TSS***		
			June, 2019	*July, 2019*	*August, 2019*
1.	*Banur*	*4*	*Complying*	*Complying*	*Complying*
2.	***Baretta***	***3***	***Non-Complying***	***Non-Complying***	***Non-Complying***
3.	***Bhikhi***	*3*	***Non-Complying***	***Non-Complying***	*Complying*
4.	***Budhlada***	*6.5*	***Non-Complying***	*Complying*	***Non-Complying***
5.	*Mandi Gobindgarh*	*25*	*Complying*	*Non-Complying*	*Complying*
6.	*Samana*	*10*	*Complying*	*Complying*	*Complying*
7.	*Sardulgarh*	*4*	*Complying*	*Non-Complying*	***Non-Complying***
8.	*Sunam*	*8*	*Complying*	*Complying*	*Complying*
9.	*Zirakpur*	*17*	*Complying*	***Non-Complying***	*Complying*
10.	*Khanauri*	*3*	*Complying*	*Complying*	*Complying*
11.	*Lehragaga*	*4*	*Complying*	*Complying*	*Complying*
12.	*Moonak*	*3*	*Complying*	*Complying*	*Complying*
13.	*Patran*	*4*	*Complying*	*Complying*	*Complying*
14.	*Rajpura*	*7*	*Complying*	*Complying*	*Complying*
15.		*10*	*Complying*	*Complying*	*Complying*
16.	*SAS Nagar*	*45.4*	*Non- Complying*	*Non-Complying*	*Non-Complying*

17.	MC Dera Bassi	4	Non- Complying	Complying	Non-Complying
18.	Lalru	1.5	Complying	Complying	Complying
19.	Patiala	46	Complying	Complying	Complying
20.		10	Complying	Complying	Complying
21.		13	Complying	Complying	Complying

The above data indicate that out of these 21 STPs, 6 STPs are not complying with norms w.r.t parameters BOD and TSS. Further, almost all the STPs are not meeting with the standard of 1000 MPN/100m1 for Fecal Coliform.

12.1.2 The status of remaining 22 Sewage Treatment Plants which are either under construction or at planning stage:

Sr. no.	Name of the Town	Proposed capacity	Status as on 31.08.2019
1.	Boha	2	5 % completed
2.	Cheema	2	DNIT is being revised.
3.	Bhadson	3	Funds not tied up
4.	Nabha	12	DNIT Prepared and under approval
5.	Dhuri	5	16 % completed
6.	Dhuri	6	Land arrangement under process by MC, Dhuri. Panachayat land identified.
7.	Sangrur	4	12 % completed
8.	Sangrur	11	Land feasibility report submitted to EO, MC Sangrur. Advertisement given by MC, Sangrur in Newspapers.
9.	Bassi Pathana	3	5 % completed
10.	Longowal	3	DNIT is being revised.
11.	Amloh	3	Case for final approval for land is in process in DLG office
12.	Dera Bassi	2	Tender received and being checked
13.	Dera Bassi	2	Tender received and being checked
14.	Lalru (Mandi)	1.5	Private land is being identified
15.	Lalru (Dappar)	1	Tender received and being checked
16.	Lalru (Gholu Majra)	0.35	Issues of technology to be decided by the PWSSB.

117

17.	Lalru (chaundheri Samalheri)	0.35	
18.	Sanour	4	Issues of land and funds are to be resolved.
19.	Ghanaur	2	Tender under process.
20.	Sirhind	2	Pond water diversion in progress
21.	Sirhind	4	5% work completed.
22.	Sirhind	5	10% work completed.

12.1.3 Upgradation of existing STPs

Sr. No.	Name of the Town	Capacity of STP (MLD)	Latest status for upgradation to meet with latest norms.
1.	Bareta (PWSSB)	3	DPR is under preparation.
2.	Bhikhi (PWSSB)	3	-do-
3.	Sardulgarh (PWSSB)	4	- do-
4.	Patiala (MC, Patiala)	Capacity enhancement (46MLD to 61MLD)	Construction work of foundation started

12.2 U.T. Chandigarh:

12.2.1 Performance status of existing 06 STPs

Sr. no.	Name of the STPs	Capacity of STPs (MLD)	Performance w.r.t parameters BOD and TSS		
			June 2019	July 2019	Aug 2019
1.	3 BRD	49.9	Complied	Complied	Complied
2.	Dhanas	7.5	Complied	Complied	Complied
3.	Raipur Kalan	22.5	Not complied	Not complied	**Not complied**
4.	Raipur Khurd	5.6	Not complied	Not complied	**Not complied**
5.	Diggian	135	Not complied	Not complied	**Not complied**
6.	Maloya	22.5	Not started operation	Not started operation	Complied

118

Total	*243 MLD*	

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12.2.2 Status of Proposed STPs

Sr. no.	***Name of the STPs***	***Capacity of STPs (MLD)***	***Timeline of commissioning of STP***
1.	*Kishangarh*	*2*	*November / 2021*

12.2.3 Status of upgradation of existing STPs to meet with latest norms

Sr. no.	***Name of the STPs***	***Capacity of STPs (MLD)***	***Timeline of upgradation of STP to meet with latest norms***
1.	*Raipur Kalan*	*22.5*	*November / 2021*
2.	*Raipur Khurd*	*5.6*	*November / 2021*
3.	*Diggian*	*135*	*November / 2021*

12.3 State of Haryana:

12.3.1 Performance status of existing STPs

There are 62 existing STPs in the State of Haryana having total treatment capacity of 503.6 MLD. Performance of these existing STPs monitored during the months June,2019 to August,2019 is mentioned as under.

Sr. No.	***Name of the district***	***Name of the town/ city***	***Existing STP and Capacity (MLD)***	***Performance w.r.t parameters BOD and TSS***		
				Jun-19	***Jul-19***	***Aug-19***
1	*Ambala*	*Naya Gaon, Unit-I, Ambala City*	*3.25*	-	-	-
2	*Ambala*	*Naya gaon, Unit-II, Ambala City*	*3.25*	-	-	-

119

3	Ambala	Baldev Nagar, Unit-I, Ambala City	5	Complied	-	-
4	Ambala	Baldev Nagar, Unit-II, Ambala City	3.25	Complied	-	-
5	Ambala	Moti Nagar, Unit-I, Ambala City	5	-	-	-
6	Ambala	Moti Nagar, Unit-II, Ambala City	5	-	-	-
7	Ambala	Modal Town, Ambala City	6	-	-	-
8	Ambala	Nasirpur, Ambala City	3.25	-	-	-
9	Ambala	Sadopur	0.25	-	-	-
10	Ambala	Devi Nagar, Ambala City	3.25	-	-	-
11	Ambala	Naraingarh	3	Complied	-	-
12	Kurukshetra	Thanesar	25	-	-	-
13	Kurukshetra	Modal Town, Pehowa	8	-	-	-
14	Kurukshetra	Ladwa Road, Shahbad	11.5	-	-	-
15	Kurukshetra	Indri Road, Ladwa	7	-	-	-
16	Panchkula	Kalka	4.5	-	Complied	-
17	Panchkula	Kalka	0.25	-	Complied	-
18	Panchkula	Nalagarh Road, Pinjore	5	-	Complied	-
19	Jind	Jind	15	-	-	Not Complied
20	Jind	Narwana	3.5	-	-	-
21	Jind	Narwana	3.75	-	-	-
22	Jind	Narwana	2.6	-	-	-
23	Jind	Uchana	2	Complied	-	-
24	Jind	Uchana	1.5	Complied	-	-
25	Jind	Jind	5	-	-	-
26	Jind	Safidon	9	-	-	-

120

27	Jind	Julana	4	Not	-	-
28	Kaithal	Cheeka	10	-	-	-
29	Kaithal	Jind Road, Kaithal	10	-	-	-
30	Kaithal	Manas Road, Kaithal	10	-	-	-
31	Kaithal	Manas Road, Kaithal	10	-	-	-
32	Kaithal	Kalayat	5	-	-	-
33	Kaithal	Pundri	3.5	-	-	-
34	Hisar	Dhani Kushal, Bhiwani Road, Hansi	5	-	Complied	-
35	Hisar	Lalpura- Jind	7.5	-	Complied	-
36	Hisar	Dhani Gram, Barwala	6	Complied	-	-
37	Hisar	Azad Nagar, Rajgarh Road Hisar	15	Complied	-	-
38	Hisar	Rishi Nagar, Hisar	40	Complied	-	Complied
39	Hisar	Hisar	4	Complied	-	Complied
40	Hisar	Narnaund	4	Complied	-	-
41	Hisar	Hansi	6.5	-	-	-
42	Hisar	Uklana	6.5	-	-	Not Complied
43	Sirsa	Chautala Road, Dabwali	16.5	Complied	-	-
44	Sirsa	Shamsabad Kalania Road, Sirsa	15	-	-	-
45	Sirsa	Vill. Nattar 1, Sirsa	5	-	-	-
46	Sirsa	Vill. Nattar 2, Sirsa	5	-	-	-
47	Sirsa	Daddu Road, Kalanwali	9.5	-	-	-
48	Sirsa	Ellenabad	7.5	-	-	-
49	Sirsa	Rania	6	Complied	-	-
50	Fatehabad	Vill. Bhodia Khera, Bhattu Road, Fatehabad	- 10	Complied	-	Complied
51	Fatehabad	Fatehabad	5	Complied	-	Complied

121

52	Fatehabad	Vill.Amani, Tohana,	10	Complied	-	-
53	Fatehabad	Ratia	6.5	Complied	-	-
54	Fatehabad	Jakhal Mandi	3.0	-	-	-
	HSVP					
55	Ambala	Sec-7, Urban Estate, Ambala City	2	-	-	-
56	Panchkula	Sec-20, Panchkula	18	-	-	-
57	Panchkula	Sec-20, Panchkula	39	-	-	-
58	Panchkula	Sec-28, Panchkula	15	-	-	-
59	Jind	Jind	10	-	-	Not
60	Kaithal	Kaithal	7.5		-	
61	Hisar	Dabara Tosham Road, Hisar	15	Complied	-	-
62	Fatehbad	Village Majra	10	Complied	-	Complied
		Total	**506.6**			

12.3.2 Status of Proposed STPs

Sr. No.	Name of the Town	Proposed STP (in MLD)	Timelines proposed as per Action Plan	Progress report
1.	Barara	4	31.10.2019	85% work has been done
2.	Jind	7	30.11.2019	75%
3.	Sec-6, Urban Estate, Thanesar	15	31.03.2020	95%
4.	Sec-21 Urban Estate, Ambala City	5	31.12.2019	20%
5.	12 Cross Road, Ambala	12	30.11.2019	5%
6.	Khagesara & Toka	0.5	31.12.2019	70%
7.	Nangal & Allipur	0.5	31.12.2019	75%
8.	Khatoli	0.75	31.12.2019	12%

9.	Kot	0.75	31.12.2019	80%
10.	Sukhdarshanapur	0.75	31.12.2019	62%
11.	Village Dabra	8	31.03.2020	10%
12.	Ambala	5	31.03.2020	20%
13.	Khuda Khurd, Ambala	12	4.02.2020	2%
14.	Sirsa	20	30.11.2019	85%
Total	**91.25**			

12.4 State of Himachal Pradesh:

12.4.1 Performance status of existing STPs

Presently, no STP is operational in Parwanoo and Kala Amb Area, which are located in the catchment area of river Ghaggar.

12.4.2 Status of Proposed STP

- *Sukhna Nallah at Parwanoo and River Markanda at Kala Amb fall in the catchment area of River Ghaggar.*

- ***Parwanoo town is located in the catchment of Sukhna Nallah.***

  - *For installation of STPs in Parwanoo town, 02 STPs have been proposed.*
  - *In one case land has been finalized which is adjoining the Solid Waste management site of MC Parwanoo at Sector 05 and is proposed be commissioned by 31.03.2021.*
  - *The other STP for Parwanoo town is proposed in Village Tipra and the said area is a forest land.*
  - *Both these STPs each of capacity 01 MLD and shall be completed and commissioned by 31.03.2021.*

- ***Kala Amb town is located on River Markanda.***

  - *One CETP cum STP of capacity 5 MLD costing Rs. 23 Crores shall be installed in Kala Amb area for which DPR has been prepared.*
  - *Land for CETP has been acquired by Deptt. of Industries. Environmental Clearance has been applied by SPV.*

123

Conclusion and recommendations

16. The conclusions and recommendations in respect of the States of Punjab, Haryana, Himachal Pradesh and UT Chandigarh are as follows:-

Based on the data and meetings held with State Level Officers, District Level Officers and spot inspections made by the Executive Committee, the State wise conclusion and recommendations are made as under:

13.1 State of Punjab:

Conclusions and recommendations

1. The Executive Committee had visited the following 4 industries of Patiala area

(Punjab) on 28.5.2019:

i) M/s Vishal Paper Industries Pvt. Ltd., Vill. Khusropur, Maine Road, Patiala;

ii) M/s Vishal Coaters, Vill. Khusropur, Maine Road, Patiala;

iii) M/s Patiala Distillers and Manufactures Ltd., Vill. Maine, Patiala

iv) M/s DSG Papers Pvt. Ltd., Vill. Bhanri, PO Wizidpur, Patiala

The recommendations made in case of each industry were sent to Chairman, Punjab Pollution Control Board, Patiala vide No. CEC/2019/211, dated 3.7.2019. These recommendations have been mentioned at pages 9 to 12 of this report. Chairman, Punjab Pollution Control Board, Patiala shall submit the action taken report on the recommendations made by the Executive Committee.

2. 30 towns have been identified, which are directly / indirectly discharging their sewage into River Ghaggar. For these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed.

3. The performance of these 21 STPs as monitored during the month June to August, 2019 indicate that 6 STPs namely Baretta, Bhikhi, Budhlada, Sardulgarh, Mohali and Dera Bassi are regularly not meeting with the prescribed standards.

Punjab Pollution Control Board shall take legal action under the provisions of Water Act, 1974 against the departments responsible for operation and maintenance of these STPs.

4. Out of 22 STPs to be installed in the remaining 12 towns, the status is as under:

✓ *-15% construction work has been completed only in 6 towns.*

124

✓ *No land has been finalized in 5 STPs (Dhuri : 6 MLD; Sangrur : 11 MLD; Lalru : 1.5 MLD; Amloh : 3 MLD and Sangrur : 4 MLD).*

✓ *3 STPs are at DNIT preparation Stage (Cheema, Nabha and Longowal).*

✓ *No funds have been tied up in case of one STP (Bhadson : 3 MLD)*

✓ *4 STPs at tendering stage (2 STPs of Dera Bassi each of capacity 2 MLD, Lalru : 1 MLD and Ghanaur : 2 MLD).*

✓ *Technology issues are to be decided in the case of 3 STPs.*

The concerned departments of State of Punjab shall ensure that all the remaining 22 STPs shall be completed and commissioned by 31-3-2021.

5. 3 STPs for the towns namely Baretta (3 MLD), Bhikhi (3 MLD) and Sardulgarh (4 MLD) have been proposed for upgradation to meet with the latest norms. Presently, these are at DPR stage. In case of one town (Patiala), capacity of STP is to be enhanced from 46 MLD to 61 MLD and construction work has been started at the site.

The concerned departments of the State Government shall ensure that the upgradation work of 3 STPs and capacity enhancement of STP at Patiala (46 MLD to 61 MLD) shall be completed and commissioned by 31.03.2021.

6. Tender for installation of 6 MLD capacity STP by the Garrison Engineer, MES, Patiala for cantonment at Patiala has been floated. Further for installation of STP of 1 MLD capacity for cantonment at Nabha, DPR has been prepared. Garrison Engineer, MES, shall ensure that STP for Patiala cantonment and Nabha cantonment shall be completed and commissioned by 31.12.2020 and 31.03.2021, respectively.

7. Proposed STPs, STPs under construction and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

8. Punjab Pollution Control Board has inspected 11 industries in the month of June 2019, 6 industries in the month of July, 2019 and 11 industries in the month of August, 2019. But, the number of industries inspected, in view of the importance of the task, was very less.

PPCB should increase frequency of regular inspection and surprise checking of industries located in the catchment area of River Ghaggar to ensure that the ETPs of all the industries are always in operation and should meet with the prescribed norms. These industries may not be allowed to discharge their treated / untreated wastewater into drains / nallah / choes / river Ghaggar.

Punjab Pollution Control Board shall also compare the analysis results of the wastewater with the values of parameters shown during visit by the OCEMS and take appropriate action in

125

the matter in case any major difference is found on comparison. The Punjab Pollution Control Board will also carry out the data analysis of OCEMS to identify the violators.

9. No inspection of any industry was carried out by the District Level Special Task Force (DLSTF) upto July,2019. However, DLSTF, Patiala has visited Jacob drain, Patiala on 21.08.2019 on which paper mills and distillery unit are located and river Ghaggar at Badshapur to check the discharge of industrial effluent into river Ghaggar. Also, 3 paper mill and 1 distillery at Patiala has been visited by DLSTF, Patiala and none of the industry was found discharging its effluent into river Ghaggar.

However, monthly checking / inspection of water polluting industries by the District Level Special Task Force (DLSTF) of all the 4 Districts (Patiala, SAS Nagar, Sangrur and Mansa) should be ensured and recommendations to take legal action against the violating industries under the provisions of the Water Act, 1974 may be sent to the regulatory body.

10. Data w.r.t. water quality of River Ghaggar monitored during January to July, 2018 and January to July, 2019 indicate that there is slight improvement w.r.t. BOD and DO parameter at all the 14 locations and improvement w.r.t Total coliform has been observed only at 3 locations.

Further, improvement w.r.t. the parameters namely BOD, DO and Total coliform has also been observed in the month of August, 2019 in comparison to the water quality as monitored in the month of July, 2018.

Department of Local Government and Punjab Water & Sewerage Board shall ensure that all the STPs shall be made operational at all the times and proper and adequate dose of disinfectant may be given at each STP to bring T.coli and F.coli parameters within prescribed norms. These departments shall ensure that all the STPs may achieve the stringent norms.

PPCB shall continue to make surprise inspections to monitor the sewage treatment plants of the local bodies and action against the violating local bodies should be taken within 21 days from the date when the violations were observed.

11. All the Departments of State of Punjab shall ensure to comply with the decisions taken / recommendations made in each meeting of the Executive Committee so that the activities to be carried out to control pollution in River Ghaggar may be completed and commissioned within the time schedule.

12. Ground water quality monitored at 14 locations along the catchment area of River Ghaggar indicate that the values of calcium (3 locations), magnesium (3 locations) and hardness at 2 locations are higher than the permissible limits and these may be due to geogenic reasons.

Punjab Pollution Control Board shall continue to carry out ground water monitoring of all the ground water sources located along River Ghaggar and these groundwater samples may be analyzed for all the required parameters and in case any

126

*groundwater sample is found contaminated and is unfit for drinking purposes, such ground water source may be capped and a display Board mentioning that "**water is not fit for drinking**" may be placed at the contaminated source.*

13. Irrigation schemes to utilize the treated sewage for irrigation of agriculture fields have been implemented in 9 towns discharging 43 MLD treated sewage, which cater 1427 hectares of land. 2 irrigation schemes for utilization of treated sewage of the towns namely Khanauri (3 MLD) and Rajpura (7 MLD) are under construction and these are likely to be commissioned by 30.6.2020 and 31.3.2020, respectively. Under these irrigation schemes, 250 Hectares of agriculture land shall be irrigated.

Further, irrigation schemes for 15 STPs (11 towns) having total discharge of treated sewage as 133.5 MLD have been proposed and are likely to be completed by 31.3.2021.

The Department of Water & Soil conservation and Department of Irrigation shall ensure that irrigation schemes to utilize the treated sewage, conforming to the prescribed standards, for all the remaining towns located in catchment area of river Ghaggar may be completed simultaneously with the commissioning of STPs.

14. Regarding treatment and management of treated sewage of villages, the concerned departments of State of Punjab has identified 389 villages. The phase wise completion of treatment system are proposed as under:

Phase — I

- *87 villages, where treatment system for treatment of sewage shall be implemented in Phase-I, have been identified.*
- *The cost of treatment system shall be Rs. 26.10 Crore.*
- *Treatment system for these villages shall be completed by 30.6.2020.*

Phase — II

- *150 villages for treatment of sewage, have been covered under Phase".*
- *Funds amounting to Rs. 45.6 Crore shall be required for completion of treatment system of these villages.*
- *Timelines for completion of these projects shall be 01.03.2020 to*

30.6.2021.

Phase — III

- *Under phase-III, 150 villages have been covered.*
- *Funds amounting to Rs. 45 Crores shall be required for completion of treatment systems of these villages.*
- *Timelines for completion of the project is 01.03.2021 to 30.6.2022.*

127

Presently, under phase-I, Out of 87 villages, treatment systems of 14 villages have been completed ***(Annexure-A)*** *and the treatment systems of other 14 villages are under progress* ***(Annexure-B).***

The department of Rural Development & Panchayat shall ensure that treatment systems for the villages as covered under Phase-I, II and III shall be completed and commissioned within time schedule as mentioned above.

15. Health checkup camps have been organized in all the 4 districts namely Patiala, Mohali, Sangrur and Mansa, where 1183 patients were checked in the month of July, 2019. Out of 1183 patients, 38 patients have been found suffered with water borne diseases. Also, in the month Aug, 2019, department of Health has organized health camps in 4 Districts and 626 Patients were diagnosed, out of which 29 patients were found suffered with water borne diseases.

The department of Health and Family Welfare shall continue to organize health check up camps in all the 4 Districts (Patiala, SAS Nagar (Mohali), Sangrur and Mansa) of the State, which are located in the catchment area of river Ghaggar.

16. PPCB shall ensure that all the remaining industries which have not installed Online Continuous Effluent Monitoring System (OCEMS), shall install and commission the same by 30.09.2019. These OCEMS shall have its connectivity with PPCB and CPCB server.

17. The department of Local Government, Punjab Water Supply and Sewerage Board, Department of Water Supply and Sanitation or any other concerned department, relating to operation and maintenance of existing sewage treatment plants, shall install CCTV cameras on all the STPs by 30.09.2019.

13.2 U.T. Chandigarh:

Conclusions and recommendations

1) For the treatment of sewage of localities/areas covered under U.T., Chandigarh, 6 STPs of total treatment capacity of 242.3 MLD are in operation. The performance of these STPs carried out by CPCC during the months June to August 2019 indicates that out of 6 STPs, 3 STPs are not complying with the norms. CPCC shall take legal action against the stakeholders for not operating their STPs effectively.

2) As per CPCC data, total discharge of sewage of Chandigarh is 243 MLD and 6 STPs of capacity 242.3 MLD are in operation. Therefore, there is a gap of only 0.7 MLD, which is to be treated by the Municipal Corporation, Chandigarh. Thus, to treat the balance quantity of wastewater, STP of capacity 2 MLD has been proposed to be set up at Kishangarh to meet with the latest stringent norms. The STP is likely to be completed by November, 2021. However, the Executive Committee recommends that this

proposed STP may be completed and commissioned by 31.3.2021.

3) For upgradation of existing STPs (Raipur Kalan : 22.5 MLD; Raipur Khurd : 5.6 MLD and Diggian : 135 MLD) to meet with the latest stringent norms, there is proposal to upgrade these STPs. The upgradation work of these STPs shall be completed by November 2021. However, the Executive Committee recommends that upgradation work of existing STPs may be completed by 31.3.2021.

4) Proposed STPs, STPs under construction and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

5) In order to check the performance of effluent treatment plants of the industries, CPCC has inspected 109 industrial units from June to August, 2019. Out of these 109 industrial units, 50 Units have been found non compliant. Out of these 50 non complaint units, 16 industrial units have been issued order for disconnection of electric connection and show cause notices have been issued to 34 industrial units.

However, CPCC shall increase its surveillance by conducting surprise inspection and forming a Environment Protection Squad. Regular check on operation of effluent treatment plants of the electroplating industries may be made as these are the source of discharge of toxic effluent into sewerage system leading to Sukhna Choe and N-Choe further leading to River Ghaggar.

6) CPCC and Municipal Corporation, Chandigarh shall ensure as under:

- *The remaining 2 outlets falling into Sukhna Choe should be closed by 31.12.2019.*
- *The remaining 9 outlets falling into N-choe should be closed by 31.12.2019.*

With the closing of these outlets and diverting their sewage into nearby STPs, there shall be further improvement in the water quality of Sukhna Choe & N-Choe and subsequently into River Ghaggar.

7) CPCC and Municipal Corporation, Chandigarh shall comply with all the decisions taken / recommendations made by the Executive Committee during its meetings (monthly meeting) with the officers of U.T., Chandigarh.

8) Water quality of Sukhna choe, as monitored by CPCC during the month April 2019 to June 2019, indicate that there is improvement in water quality of Sukhna choe w.r.t. parameters BOD, COD & TSS but no improvement has been observed w.r.t. F. Coliform parameter.

Similarly, water quality of N-choe, as monitored by CPCC during the month April to June 2019, indicates that there is improvement in the water quality w.r.t. parameters BOD, COD & TSS. However, there is no improvement in the water quality of N-Choe w.r.t. F.Coli parameters.

Therefore, the Executive Committee recommends that Municipal Corporation, Chandigarh shall make adequate arrangements for disinfectant dosing in STPs so that the value of F.Coliform may be reduced to the prescribed norms.

9) CPCC is monitoring the ground water quality of various areas of Chandigarh falling into catchment area of Sukhna Choe and N-Choe. Ground water samples of 7 locations were monitored in the month of July, 2019 and their analysis results indicate that there is no contamination in groundwater sources of Chandigarh area w.r.t. organic, inorganic, heavy metal and F.Coliform.

CPCC shall continue to monitor the ground water quality of various locations in the catchment area of Sukhna choe and N-Choe.

10) District Level Special Task Force (DLSTF) has inspected 15 industrial units, out of which 5 units were found non compliant and show cause notices have been issued to these units.

DLSTF shall continue to inspect industrial units falling in catchment area of Sukhna-Choe and N-Choe and action against the violating industries may be recommended to CPCC. It shall also hold monthly meeting with District Level Officers and monitor all the activities relating to control of pollution into Sukhna Choe and N-Choe and subsequently, in River Ghaggar. Monthly action taken report shall be submitted to the Executive Committee.

11) Department of Health & Family Welfare, Chandigarh is regularly carrying out Health Check-up Camps in Chandigarh wherein free medicines are distributed and free laboratory tests are conducted as per the convenience of the patients. In these camps, intensive information and awareness generation activities are carried out in the form of health talks, distribution of pamphlets and display of IEC material in the camps.

The Dept. of Health & Family Welfare shall continue to hold such Health Check up Camps on monthly basis.

12) CPCC and Municipal Corporation Chandigarh shall ensure that OCEMS and CCTV cameras on all the existing STPs may be installed within the time schedule as mentioned in the Action Plan.

13.3 State of Haryana

Conclusion and recommendations

130

1. The Executive Committee had visited the following 5 industries of Pehowa area, Distt. Kurukshetra (Haryana) on 29.4.2019 : -

i) M/s Sainsons Paper Industries Pvt. Ltd., Plot No. 5, Vill-Bakhli, Tehsil Pehowa, District- Kurukshetra, Haryana.

ii) District-Kurukshetra;

iii) M/s Shiv Paper Board Mill, Arunai Road, Vill-Dhanirampura, Tehsil-Pehowa, District-Kurukshetra;

iv) M/s Kailash Paper Board Mill, Arunai Road, Vill-Saraswati Khera, Tehsil-Pehowa, District-Kurukshetra

v) M/s Sunrise Paper Board Mill, Vill-Guldhera, Tehsil-Pehowa, District-Kurukshetra

The recommendations made in case of each industry were sent to Chairman, Haryana State Pollution Control Board, Panchkula vide No. CEC/2019/123, dated 21.5.2019. These recommendations have been mentioned at pages 4 to 6 of this report. Chairman, Haryana State Pollution Control Board, Panchkula shall submit the action taken report on the recommendations made by the Executive Committee.

2. In the State of Haryana, there are 62 existing STPs having total treatment capacity of 503.6 MLD. HSPCB has carried out performance of 27 STPs out of total 62 STPs during the month June 2019 to August 2019. In the month of June, 2019, performance of 19 STPs was checked, out of which 18 STPs were found compliant. In the month of July, 2019, 5 STPs were monitored and all were found compliant. In the month of Aug, 2019, 8 STPs were monitored out of which 5 STPs were found compliant.

It is mention here that HSPCB is not regularly monitoring the all the STPs of the State. Therefore, the Executive Committee recommends that HSPCB shall ensure to check the performance of all the existing STPs on monthly basis and action against the non compliant STPs may be taken under the provisions of the Water Act, 1974.

3. There is proposal to install 14 STPs to treat 91.25 MLD of sewage. The construction works of these STPs has been started and are likely to be completed by 31.3.2020.

4. Proposed STPs, STPs under construction and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'bie NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

5. HSPCB has inspected 6 industries during the period June 2019 to August 2019 and all these industries were found violating the norms. Out of these 6 industries, the closure orders

have been recommended against 4 industries and re-sampling to be carried out in case of 2 industries.

It is mentioned here that the number of inspection made by HSPCB is very less. It has to increase its surveillance by surprise checking or through Environment Project Squad and shall ensure that every industry located in the catchment area of River Ghaggar should be visited at least once in a quarter.

6. The irrigation department, State of Haryana has prepared a pilot project for installation of solar / grid powered micro irrigation infrastructure on STPs for utilization of treated sewage for irrigation, which was completed on 31.01.2019 and irrigation facility was created for 76 hectares in Pehowa Block. Regular irrigation schemes shall be started in the next coming crop season. Similarly, with a view to utilize the treated sewage of the towns for irrigation, a project costing of Rs. 235.94 Cr. has been prepared. In the first phase, treated sewage of STPs of Fatehabad, Sirsa, Hisar and Jind District costing Rs. 87 Crore has been planned.

The Department of Irrigation, State of Haryana shall install and commission irrigation schemes to utilize the treated sewage of all existing STPs by 31.03.2021.

Similarly, the irrigation schemes for utilization of treated sewage of the towns for which STPs are either under construction or in the planning stage shall be installed and commissioned by 31.3.2021.

7. For the treatment of sewage of the villages having discharge more than 300 KLD, presently, the Deptt. of Rural Development & Panchayat, Haryana has no proposal to install the STPs for the villages.

The Executive Committee recommends that HSPCB shall take up the matter with Deptt. of Rural Development & Panchayat to prepare proposal to install STPs for the villages having discharged more than 300 KLD under Phase-I. Later on, the villages having sewage discharge less than 300 KLD may be taken in Phase-II. The irrigation schemes for utilization of treated sewage of these villages may be prepared by 31.12.2019.

8. The Deptt. of Urban Local Body, HSPCB and other concerned departments shall comply with the decisions taken / recommendations made during the meeting taken by the Executive Committee and action taken report be submitted to the Committee well in time.

*9. The Ground Water Quality of the various locations in the catchment area of River Ghaggar, as analyzed by HSPCB during the month July, 2019, indicates that out of total 34 locations, contamination has been observed at 4 locations. HSPCB shall cap these locations and a display Board mentioning that "**water is not fit for drinking**" may be placed at the contaminated sources.*

132

10. In 8 districts (Panchkula, Ambala, Kurukshetra, Kaithal, Jind, Fatehabad,Hisar and Sirsa) located in the catchment area of River Ghaggar, 21 Health Check up Camps have been organized.

- *Out of these 21 Health Check up Camps, 14 camps have been organized in district Kaithal, where 565 patients were examined in different villages.*

- *Out of remaining 7 camps, 3 camps have been organized in district Ambala, 2 camps in Fatehabad, where, 54 patients were examined and in district Sirsa 2 Health Check up Camps were organized, where, 84 patients were examined.*

The department of Health shall ensure that regular health check up camps may be organized for the localities/areas falling in the catchment area of river Ghaggar.

13.4 State of Himachal Pradesh:

Conclusions and recommendations

1. Presently, no STPs is in operation in Parwanoo and Kala Amb area of Himachal Pradesh, which are located in the catchment area of River Ghaggar. Sukhna Nallah at Parwanoo and River Markanda at Kala Amb fall in the catchment area of River Ghaggar.

For installation of STPs in Parwanoo town, 02 STPs each of capacity 1 MLD have been proposed and these shall be installed and commissioned by 31.03.2021.

For treatment of sewage and industrial effluent of Kala Amb area, one CETP cum STP of capacity 5 MLD, costing Rs. 23 Crores has been proposed for which DPR has been prepared. The said CETP cum STP shall be installed & commissioned by 31.03.2021.

2. One STP of capacity 1 MLD for the villages Trilokpur and Kheri, falling in the catchment area of River Markanda, shall be installed and commissioned by 31.03.2021.

3. All the STPs should have a provision of disinfection for ensuring control of fecal coliform as well as sludge digesters for converting sludge into manure.

4. Necessary measures shall be taken by Urban Development as well as Irrigation & PH Department to ensure that the generated sewage in the catchment of river Kaushalya, River Markanda is intercepted and diverted to the existing STPs/ proposed STPs so that natural drains are restored and no sewage drain outfalls exists in future.

5. Proposed STPs for Parwanoo area, villages Trilokpur and Kheri and STP cum CETP for Kala Amb area shall be installed to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

6. All the treated sewage shall be utilized for flushing (in residential apartments, office, malls/commercial complexes),

gardening, construction activity, irrigation purposes etc., and proposals shall be finalized in this regard by the State of Himachal Pradesh.

7. Dedicated drainage/sewerage network for carrying industrial effluent from industrial area of Kala Amb to the proposed CETP shall be laid or constructed and commissioned by 31.03.2021.

8. Real Time Water Quality Monitoring System (RTWQMS) has been installed on River Kaushalya and its data transfer system shall be connected to HPPCB server and CPCB server.

9. RTWQMS shall be installed on River Markanda by 30.09.2019 and data transfer system shall be connected to HPPCB server and CPCB server.

10. HPPCB has inspected 69 industrial units located in the catchment area of Sukhna Nallah during the months June, 2019 to Aug, 2019. Out of these 69 units, 3 industries have been found violating the norms. Out of these 3 units, power connection of 1 unit has been disconnected and re-sampling of remaining 2 units shall be carried out.

Similarly, HPPCB has inspected 101 industrial units located in the catchment area of River Markanda during the months June, 2019 to Aug, 2019. Out of these 101 units, 3 industries have been found violating the norms. Out of these 3 units, environmental compensation amounting to Rs. 18750/- has been imposed 1 unit. Power connection of remaining 2 units has been disconnected and also environmental compensation of Rs. 3,20,000/- has been imposed on these 2 units.

No industry has been inspected by District Level Special Task Force (DLSTF) so far. Therefore, HPPCB and District Level Special Task Force shall continue to visit the industries located in the catchment area of River Markanda and Sukhna Nallah on monthly basis and reports be submitted to HPPCB for initiating legal action under the provisions of the Water Act, 1974 against the violating industries.

11. 11. HPPCB has claimed that M/s Ruchira Paper Ltd (Pulp and paper manufacturing unit) has installed OCEMS and data is being displayed on CPCB and HPPCB server. The State Board is also collecting monthly effluent samples from the final outlet of the industry. However, nothing has been mentioned about matching of the analysis results.

Therefore, HPPCB shall ensure that on each visit of the industry, the analysis results of effluent samples of the industry, analysed in the laboratory, should be matched with the analysis results displayed on OCEMS. In case any major difference is found, appropriate action in the matter may be taken.

12. 5 cleanliness drives in the catchment area of Sukhna Nallah and 1 cleanliness drive in Kala Amb area have been carried out. In the cleanliness drive conducted in Kala Amb area, about 400 participants from various industries, schools and Government offices collected more

than 15 MT solid waste from various streams. Also, a plantation campaign was carried out in Sirmour town in which 500 plants were planted.

HPPCB shall continue to conduct such cleanliness drive in Kala Amb and Parwanoo area on regular basis.

*13. It has been reported by HPPCB that no contamination of groundwater has been observed in the catchment area of river Markanda and Sukhna Nallah. However, HPPCB shall carry out groundwater sampling to check the ground water quality of the point sources located on River Markanda and Sukhna Nallah on quarterly basis and wherever the ground water quality is found unfit for drinking purpose, such water sources be capped and a display board mentioning that the '**water is not fit for drinking purpose**' may be placed.*

14. 8 health camps have been organized in the catchment area of river Markanda and 8 multi specialty health camps were organized in Kala Amb area and 1600 patients were benefitted.

Department of Health shall organize regular health camps in the localities / villages falling in the catchment area of River Markanda and Sukhna Nallah.

15. Integrated solid waste management facility at Parwanoo shall be developed in a scientific manner in accordance with the SWM Rules, 2016 as amended and also as per guidelines of CPCB by 31.03.2021. Necessary fencing or wire mesh system shall be installed along Sukhna Nallah and Markanda River at Solid Waste littering hot spot.

16. HPPCB shall peruse the matter of E-Flow Regulation with Government of Himachal Pradesh for River Kaushalya and River Markanda as well as watershed management in the catchment of river Kaushalya and River Markanda.

17. HPPCB shall encourage only roof top rainwater harvesting by the industries.

18. HPPCB and other departments of the State of Himachal Pradesh shall comply with all the decisions taken / recommendations made in the meetings of the Executive Committee and action taken report be submitted to the Committee well in time.

Analysis and discussion

17. River Rejuvenation monitoring may generally involve following components:

a. Environmental Flow
b. Quality of the River and groundwater
c. Sewage Treatment Plants and Online Monitoring
d. Use of treated Waste Water

135.

e. Septage and Faecal Sludge Management
f. Industrial Pollution and CETPs
g. Solid Waste Management and issues of Legacy Waste in areas falling in catchment of river Ghaggar
h. Creating public awareness through Information, Education and Communication (IEC)

It is desirable that henceforth, the Committee, as far as possible, gives report in terms of the above heads for facility of consideration.

18. The report of the Committee shows that the authorities have 'miles to go' to achieve the water quality standard. Strenuous efforts are required to ensure that no untreated sewage or trade effluents are discharged in water bodies and also no solid waste is dumped in the water bodies which requires robust environmental governance. This can be ignored by the authorities only at their own peril. A welfare State cannot afford to show apathy to degradation water quality and failure of waste management mechanism. This needs to be attended at highest level with promptitude and accountability of officers entrusted the job has to be ensured. Lack of funds cannot be pleaded as the issue is linked to the right to life. Funds may be generated from persons adding to pollution or otherwise. The conclusions of the Committee with reference to concerned State/UT need to be attended and acted upon expeditiously in accordance with law.

17. Action plans have been prepared by the concerned States with reference to some of the above points in terms of orders of this Tribunal in O.A. 673/2018. Vide order dated 08.04.2019, in the said matter, the Tribunal directed that the action plans have to be executed latest by 31.03.2021.

18. As noticed in the order dated 07.08.2018, the main concern for remedying the pollution of rivers is preventing discharge of untreated sewage or effluents or dumping of garbage to enforce the statutory

provisions and to improve and maintain the water quality conforming to the prescribed standards within a targeted timeline. In this regard, it is also necessary to ensure that discharge of any untreated waste water is stopped as doing so is in violation of Section 25 of the Water (Prevention and Control of Pollution) Act, 1974. To give effect to this mandate of law, in pursuance of order of the Hon'ble Supreme Court in Paryavaran Suraksha case, (2017) 5 SCC 326, this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 directed all the local bodies and concerned departments of the States to ensure 100% treatment of sewage, failing which compensation will be liable to be recovered from the defaulting States/UTs with effect from 01.04.2020.

Accordingly, all the concerned States/UT relevant for River Ghaggar must ensure installation of STPs within the planned timelines subject to the rider that where the timelines proposal goes beyond 31.12.2020, the timeline will be treated to be 31.12.2020. Wherever timeline already laid down by the State/UT is exceeded, compensation will be payable @ Rs 10lakh/month per STP till commissioning of STPs. This scale of compensation will also apply, in respect of STPs for which timeline for construction of STP is beyond 31.12.2020, from 01.01.2021.

19. The other main source of pollution of the river is discharge of untreated effluents which is an offence under Section 25 of the Water Act. Such discharge has to be stopped forthwith and coercive measures adopted wherever it is found. Let the concerned SPCBs/PCC take steps in terms of observations of the Committee after considering the response of the alleged polluter. If the

Committee observes that SPCBs/PCC has not taken necessary and adequate action, report be given to this Tribunal.

20. Apart from the issue of installation/ upgradation of STPs and action to be taken for discharge of untreated effluents in terms of paras 18 and 19 above, the Committee has also made recommendations on the subject of e-flow, quality of river and ground water, use of treated waste water, IEC activities and organizing health check ups. The Committee has also given data with regard to drains directly discharging sewage and sullage into the river reflected in the water quality shown by the samples taken. It is necessary wherever feasible that all such drains are duly tapped and connected to the existing and proposed STPs and till then in-situ remediation is ensured so that no untreated sewage or industrial effluent is discharged directly into the river. Let steps be taken by concerned States/UTs in terms of the said recommendations.

One of the major sources affecting water quality of the rivers is unscientific dumping of solid waste. Let the local bodies in the catchment areas of the river and its tributaries ensure all necessary steps are taken to prevent such dumping. The Committee may oversee this aspect and give its report.

Clarification about future functioning of the Committee

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

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

Order about incidental issues

22. We may also dealt with an incidental issue in view of two letters received from the Monitoring Committee. Letter dated 04.09.2019 seeks clarification about honorarium to be paid to the Justice Jasbir Singh, former Judge, Punjab and Haryana High Court and Ms. Urvashi Gulati, former Chief Secretary, Haryana. It is made clear that the State of Punjab will pay honorarium to Justice Jasbir Singh out of the funds available with Punjab State PCB and State of Haryana will pay honorarium to Ms. Urvashi Gulati out of the funds available with Haryana State PCB. The second letter dated 16.10.2019 is for honorarium to be paid to Dr. Babu Ram, former Member Secretary, Punjab State PCB who is assisting the Committee for river Gaggar, river Satluj as well as for solid waste management. He is being paid @ Rs. 54,580/- which is inadequate. The same may be increased to Rs. 75,000/- per month, to be paid by the State of

Haryana out of the funds available with the Haryana State PCB. Dr. Babu Ram will act as Technical Expert to the Committees henceforth.

Directions

23. Accordingly, following directions are issued:-

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

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

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

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

(v) Let steps be taken by concerned States/UTs in terms of the recommendations and for compliance of direction for connecting the

drains to the STPs wherever feasible and till then in-situ remediation in terms of para 20 above.

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

A copy of this order be sent to the Chairmen, Member Secretaries, Secretaries Urban Development and Secretaries Irrigation and Public Health of all the four States/ UT in question.

List for further consideration on 17.01.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

K. Ramakrishnan, JM

Dr.Nagin Nanda, EM

Saibal Dasgupta, EM

November 22, 2019
Original Application No.138/2016 (TNHRC)
(Case No.559/19/11/14)
WITH
Original Application No.139/2016 (TNHRC)
(Case No.600/19/11/14)
A

Annexure-2

OFFICE OF THE EXECUTIVE COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.606 of 2018

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

Email: cecghaggar@gmail.com

To

The Chairman,
Punjab pollution Control Board,
Patiala

No. CEC/2019/491
Dated: 14.10.2019

Subject: **Report on visit to M/s Piccadilly Sugar and Allied Industries Ltd; (Distillery Unit) Village Hamjheri, Tehsil Samana, District Patiala on 19.9.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA no. 138 and 139 of 2016 in the matter of Stretch Grips Mansa's Ghaggar River (Suo Moto case) and Yogender Kumar.**

Please find enclosed herewith Report on visit to M/s Piccadilly Sugar and Allied Industries Ltd; (Distillery Unit) Village Hamjheri, Tehsil Samana, District Patiala carried out by the Executive Committee constituted by Hon'ble National Green Tribunal in OA no. 138 and 139 of 2016 in the matter of Stretch Grips Mansa's Ghaggar River (Suo Moto case) and Yogender Kumar on 19.9.2019 for your information and necessary action please.

He is requested to take necessary action on the recommendation made by the Executive Committee at point 2.3 (Page-11 of the report) and point no. 3.2 (Page 14-15 of the report) and submit the action taken report **within 21 days**.

DA/ as above

14/10/2019
(Dr. Babu Ram)
Member,
Executive Committee

Endst.No. CEC/2019/492 Dated: 14.10.2019

A copy of the above alongwith copy of the report is forwarded to the Deputy Commissioner, Patiala for information and necessary action please. He is requested to take action on the recommendations made by the Executive Committee at point no. 2.3, sub point no.2 (page 11 of the report) and submit action taken report to the Executive Committee within 1 month.

DA/ as above

14/10/2019
(Dr. Babu Ram)
Member,
Executive Committee

Endst.No. CEC/2019/492-A Dated: 14.10.2019

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

DA/ as above

14/10/2019
(Dr. Babu Ram)
Member,
Executive Committee

142

Report on visit to M/s Piccadily Sugar and Allied Industries Ltd; (Distillery Unit) Village Hamjheri, Tehsil Samana, District Patiala on 19.9.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA no. 138 and 139 of 2016 in the matter of Stretch Grips Mansa's Ghaggar River (Suo Moto case) and Yogender Kumar.

The following were present during the visit:

A) Members of the Executive Committee

Sr. no.	Name and Designation	Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab & Haryana High Court	Chairman
2.	Dr. Babu Ram, Former Member Secretary, PPCB	Member
4.	Dr. V.K. Hatwal, Scientist 'D', Ministry of Environment, Forest and Climate Change	Member

B) Officers of Punjab Pollution Control Board

Sr. no.	Name and Designation
1.	Er. Gursharan Dass, Environmental Engineer, PPCB
2.	Er. Gurkaran Singh, Asstt. Environmental Engineer, PPCB

C) Officers of Haryana State Pollution Control Board

Sr. no.	Name and Designation
1	Sh. Raj Kumar, Scientist 'B', HSPCB
2	Ms. Poonam Langyan, Asstt. Environmental Engineer, HSPCB
3.	Sh. Vinay Gill, Asstt. Environmental Engineer, HSPCB

1.0 Background

M/s Piccadily Sugar and Allied Industries Ltd; (Distillery Unit) Village Hamjheri, Tehsil Samana, District Patiala is a distillery unit, manufacturing Ethyl alcohol @40 KLD using molasses as raw material. It was granted consent under the provisions of the Water Act, 1974 vide No. F-245 dated 27.5.2004 and under Air Act, 1981 vide No.F-288, dated 27.5.2004 and both these consents were valid upto 31.3.2019. The consent under the provision of Water Act, 1974 was granted for the discharge of spent wash effluent @320 KLD on to land for bio-composting, bottle washing effluent @ 100 KLD on to land for plantation and domestic effluent @15 KLD on to land for plantation.

Further, the industry was granted Environment Clearance for expansion of molasses based distillery from 40 KLD to 70 KLD to manufacture rectified sprit/ENA/fuel Ethanol by the Ministry of Environment and Forest, Government of India vide no. J-11011/1263/2007-1A11(1) dated 16.09.2008. As per the

143

Environment Clearance, the quantity of spent wash generation was mentioned as 770 KLD and the same is to be treated by bio-methanization followed by evaporation and composting with press mud. Spent wash from distillery after bio-methanization and evaporation was mentioned as 2 KL/kl of alcohol produced. An area of 8 acres was earmarked for compost yard, spent wash lagoon and storage of finished products.

The consents granted under Water Act, 1974 and Air Act, 1981 were renewed on 5.08.2011 to 8.08.2012 for manufacturing of ethyl alcohol @40 KLD using molasses as raw material. Further, the industry was granted varied consent to operate under Water Act, 1974 and Air Act, 1981 vide no. R12PTACTOW/71611 and 12PTACTOA/70479 dated 30.8.2012 for the manufacture of Ethyl alcohol @40 KLD using molasses @180 TPD and grain @100 TPD.

For the treatment of effluent of the industry, it has installed an effluent treatment plant consisting of collection tank, bio-digester, lagoons, clarifier and Multi Effect Evaporator (MEE) to handle the spent wash of molasses based unit. As claimed by the industry, spent wash generated from distillation column shall be taken to MEE. Further, MEE concentrate shall be taken into biogas digester (UASB) and the biogas to be produced shall be used as fuel in the boiler. The treated effluent after UASB has to be mixed with press mud to manufacture bio compost in the bio-compost yard. The press mud shall be procured from their Sugar Mill unit located at Indri in Haryana. The representative of the industry has further claimed that for bio-composting, the industry has provided bio-compost area measuring 257mX166m with total area 10.51 acres. As per the observations of the visiting officer, who visited the industry on 15.9.2018, has reported that the industry has installed 3 lagoons in its premises, out of which 2 are located near MEE area. The representative of the industry has claimed in the hearing before the competent authority on 25.6.2018 that the treated effluent from the secondary clarifier will be utilized in plantation area measuring about 15 acre but the plantation area to be used for the discharge of treated effluent was not properly developed.

144

2.0 Visit to the industry

The Executive Committee visited the industry on 19.9.2019 based on the complaint made by the residents of the nearby villages. Furthermore, earlier public complaint was received in the office of the Executive Committee and the same was sent to Chairman PPCB vide no. CEC/2019/21 dated 11.03.2019 **(Annexure-1).** In the said complaint, it has been alleged that the distillery unit namely Ms. Piccadily Sugar and Allied Industries Ltd. (Distillery Unit) Village Hamjheri, Tehsil Samana, District Patiala manufactures alcohol using molasses as a raw material. During the manufacturing process, toxic effluent is generated and the same is discharged into underground by constructing bore wells. This effluent has now been discharged onto land for stagnation in an area of 50-60 acres which generate obnoxious odour and becomes the source of generation of mosquitoes and flies. This openly discharged effluent has also become the source of various diseases.

The residents of the nearby villages again made verbal complaint by attending the office of Executive Committee at Mohali regarding the discharge of toxic effluent on to land for stagnation and generation of obnoxious odour by the industry. Therefore, the Executive Committee made its plan to visit the industry on 19.9.2019. During visit, the Monitoring Committee made field inspection and collected the effluent samples from various locations of the industry.

2.1 Collection of effluent samples and their analysis results

The Executive Committee after visiting the industry thoroughly, collected effluent samples from the various points and their analysis results are mentioned as per Table-**1(Part-A and Part-B)** given below.

Part-A

Table-1: Analysis results of the effluent samples collected from various points.

S.no	Point of sample collection	Parameters (all the parameters are in mg/l except pH, Conductivity and SAR)						
		pH	TSS	BOD	COD	O&G	Conductivity (µs/cm)	SAR
1.	Bio-composting yard	6.6	27004	125000	264960	34.0	53000	-
2.	Lagoon-1	5.51	2804	48000	105920	24	30000	-
3.	Bio-composting yard	6.34	13862	72500	177760	28	44000	-
4.	Stagnated	7.80	1104	15500	40480	24	33000	-

145

	wastewater near agriculture land							
5.	Stagnated wastewater on open land	8.20	536	7350	16320	22	17120	4.39
6.	Stagnated wastewater on open land	8.34	882	7600	16960	24	17070	4.20
7.	Lagoon no.2	7.50	276	5800	15360	26	18032	-
8.	Tubewell water near cow room	8.04	ND	0.8	17.6	ND	1170	-
9.	Piezometer no.1 near boiler house (180' depth)	7.82	7.0	2.1	19.2	ND	1780	-
10.	Piezometer no.1 near boiler house (180' depth)	7.85	34.0	2.8	23.6	ND	1783	-

Part-B

Table-1: Analysis results of the effluent samples collected from various points.

S.no	Point sample collection	Parameters (all the parameters are in mg/l except Turbidity)					
		TDS	Cl	T.Hardness	Ca	Mg	Turbidity (NTU)
1.	Bio-composting yard	-	-	-	-	-	-
2.	Lagoon-1	-	-	-	-	-	-
3.	Bio-composting yard	-	-	-	-	-	-
4.	Stagnated wastewater near	-	-	-	-	-	-

146

	agriculture land						
5.	Stagnated wastewater on open land	-	-	-	-	-	-
6.	Stagnated wastewater on open land	-	-	-	-	-	-
7.	Lagoon no.2	-	-	-	-	-	-
8.	Tubewell water near cow room	680	106	346	96	25.700	0.5
9.	Piezometer no.1 near boiler house (180' depth)	1070	106	290	88	17	4.0
10.	Piezometer no.1 near boiler house (180' depth)	1060	108	284	80	20.412	29.0

The analysis report of the effluent samples collected from various points is annexed as per **Annexure-1**.

2.1.1 Discussion on the analysis results

Analysis results indicate that the concentration of BOD, COD and TSS in the effluent lying spread in bio-composting yard was observed to be 125000 mg/l, 264960 mg/l and 27004 mg/l, respectively. The value of conductivity was observed as 53000 µs/cm. One more effluent sample from bio-compost yard, which was stagnating/found spread, was also collected and its analysis results indicated the value of BOD, COD and TSS as 72500 mg/l, 177760 mg/l and 13862 mg/l, respectively. The value of the conductivity was found as 44000 µs/cm. The values of the parameters namely BOD, COD and TSS were found as 15500 mg/l, 40480 mg/l and 1104 mg/l respectively, in the stagnated wastewater near agriculture land. In the effluent sample collected from stagnated wastewater in an open land, the values of the parameters were observed as BOD: 7350 mg/l, COD: 16320 mg/l and TSS: 536 mg/l. In one more effluent sample collected from stagnated wastewater on open land, the concentration of the parameters namely BOD, COD and TSS was found as

147

7600 mg/l, 16960 mg/l and 882 mg/l, respectively. The value of conductivity in the stagnated wastewater near agriculture land and on open land as mentioned above was found as 33000 µs/cm, 17120 µs/cm and 17070 µs/cm.

The effluent samples were also collected from lagoon-1 and lagoon-2 and the values of parameters were observed as BOD: 48000 mg/l , COD: 105920 mg/l and TSS: 2804 mg/l (lagoon-1). The concentration of these parameters in the effluent sample collected from lagoon-2 was observed as BOD: 5800 mg/l, COD: 15360 mg/l and TSS: 276 mg/l. The value of conductivity in the effluent sample collected from lagoon-1 and lagoon-2 was found as 30000 µs/cm and 18032 µs/cm.

All these values indicate that the concentration of BOD, COD and TSS in the effluent either lying spread in bio-compost yard or stagnated wastewater in agriculture land/open land are much higher than the permissible values of BOD: 30 mg/l, COD: 250 mg/l and TSS: 100 mg/l, respectively. Thus, the industry has grossly violated the norms prescribed by the Regulatory Authority and has damaged the environment.

Further, two groundwater samples from Peizometer no.1 near boiler house were also collected and in these groundwater sample, the value of BOD was found as 2.1-2.8 mg/l, COD has 19.2-23.6 mg/l, TDS in these samples was observed between 1060-1070 mg/l and TSS was found varied between 7-34 mg/l. One ground water sample was also collected from tube well and its analysis results are BOD: 0.8 mg/l, COD: 17.6 mg/l and TSS: 8.4 mg/l. The values of general parameters like Calcium, Magnesium, Total Hardness and Chloride in these groundwater samples were observed to be varied between 80-96 mg/l, 17-25.76 mg/l, 284-346 mg/l and 106-108 mg/l, respectively. The values of these parameters are more or less near to the acceptable limits but within the permissible limits. So far as the values of BOD, COD and TSS are concerned, though these values are not much [(BOD: 0.8-2.8 mg/l), (COD: 17.6-23.6 mg/l), (TSS: 7.82-8.04 mg/l) and (Turbidity: 0.5-29 NTU)] but these parameters should not be present in the water to be used for human consumption. Such water may be utilized for agriculture purposes.

2.2 Observations of the Executive Committee

The Executive Committee has made the following observations based on field visit and analysis of effluent samples collected from various locations.

Observations based on field visit

1) As per record of PPCB, though, it has been claimed by the industry that the spent wash generated from distillation process is taken into multi-effect evaporator and the concentrated effluent further taken into UASB and the effluent generated after UASB is mixed with press mud to manufacture

148

Plate-3: Photograph showing spent wash stagnated in the fields and forming pond

Plate-4: Photograph showing spent wash stagnated in the fields and forming pond

Plate-5: **Photograph showing spent wash stagnated in the fields and one of the complainant collecting effluent sample from the fields**

4) The Committee also checked the area, where the complainants have made complaint that effluent is being stored in another lagoon and the bore well, which was earlier being used for discharge of spent wash but now has been

149

compost in the bio-compost yard but at the time of visit, the Executive Committee observed that huge quantity of spent wash was found stored in a brick lined lagoon. But the spent wash which was used to mix with press mud to manufacture bio-compost was raw spent wash (BOD: 125000 mg/l and COD: 264960 mg/l). The multi-effect evaporator was not in operation and UASB is lying defunct from the past many months.

2) The condition of the bio-compost yard, where the spent wash was being used to mix with press mud to manufacture bio-compost, was pathetic. Spent wash was found stagnated/spread at various places of the bio-compost area. At one corner of the bio-compost area, the stagnated spent wash made its route to enter into fields forming big pond and has become the big source of groundwater pollution. The photographs **(Plate-1 and Plate-2)** showing the effluent stagnated/spread at different places in the bio-compost yard are mentioned as under.

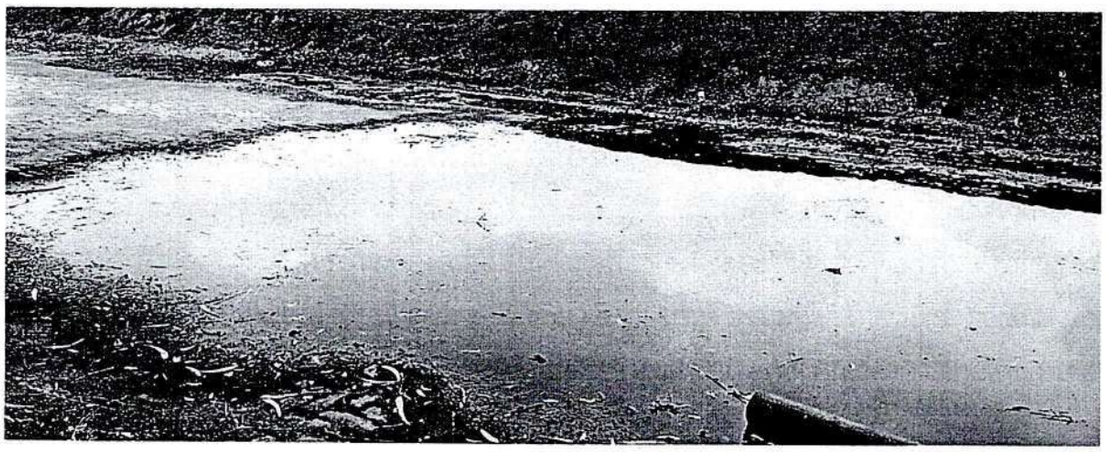

Plate-**1: Photograph showing stagnation of spent wash in bio-compost yard**

Plate-2: Photograph showing stagnation of spent wash in bio-compost yard

3) The spent wash, stagnating in the bio-compost yard, overflows and enters into fields and forms big pond in the fields. The photographs showing the spent wash stagnated in the fields in the form of pond are mentioned as per **Plate-3, Plate-4 and Plate-5** as under.

150

closed. The photographs showing the closed bore well and newly constructed lagoon are mentioned as per **Plate-6 and Plate-7,** given below:

Plate-6: Photograph showing the bore well told to be used for disposal of spent wash, presently has been closed

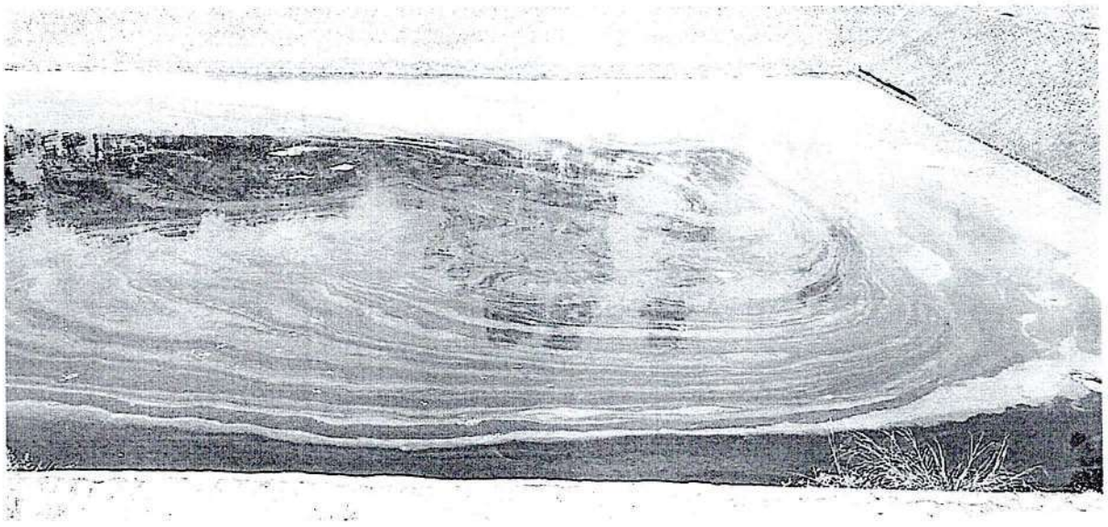

Plate-7: Photograph of newly constructed lagoon for storage of spent wash

The Executive Committee was also shown the piezometer well, whose water apprehensively mentioned as contaminated. The photograph of the piezometer well is shown as per **Plate-8.**

151

2.3 Recommendations

Based on field visit of the industry and analysis results of effluent and groundwater samples collected from various locations, the Executive Committee has made its following recommendations.

1) Chairman Punjab Pollution Control Board shall follow due procedure and issue following directions to the industry under the provisions of Water Act, 1974:
   a) Revoke consent to operate under the provisions of Water Act, 1974.
   b) Directions for closure of the industry
   c) Direction to PSPCL for disconnection of electric connection of the industry.
   d) Impose environment compensation amounting to Rs 1 crore and the said amount may be utilized for rejuvenation of quality of environment.
   e) Upgrade effluent treatment plant to Zero Liquid Discharge Technology within 6 months and it shall not be allowed to discharge any trade effluent on to land/drain/Nallah/River etc.
   f) Submit performance guarantee amounting to Rs 50 lakh for successful installation and commissioning of Zero Liquid Discharge Technology.
2) Deputy Commissioner, Patiala shall constitute a committee of the following officers to dig out the well/areas, where the complainants have claimed that the sludge/highly contaminated effluent was dumped in the well/area.
   a) Sub divisional Magistrate, Patiala
   b) Environmental Engineer, PPCB, Patiala
   c) Representative of Legal Services Authority
   d) Deputy Superintendent of Police
   e) Sarpanches of two villages near to the industry

The report of the Committee may be sent to Chairman, PPCB within 21 days for further action as per the provision of Water Act, 1974 under intimation to the Executive Committee.

3.0 Inspection of STPs Moonak

The Executive Committee visited the STP Moonak, which has been provided to treat the sewage of Moonak town. The capacity of STP is 3 MLD and the same is based on SBR technology. During visit to the STP on 19.9.2019, STP was in operation. The screen chamber and aeration tank in reaction mode are mentioned in **Plate-9 and Plater-10**.

Plate-8: Photograph showing piezometer whose water apprehensively mentioned as contaminated

2.2.2 Observation based on analysis results of effluent samples and groundwater samples

1) Though the industry was utilizing its spent wash containing very high values of BOD and COD as 125000 mg/l and 264960 mg/l, respectively, for manufacturing of bio-compost using spent wash and press mud but the method was crude and no scientific approach was adopted, which resulted into spreading of spent wash in the bio-compost area, which was containing very high value of BOD as 72500 mg/l and COD as 177760 mg/l. Further, from this bio-compost yard, the spent wash had entered into adjoining land and effluent was found stagnated in the agriculture/ open land which formed a large pond in the open land/ agriculture fields. The photographs of the same have been mentioned as per **Plates-3, 4 and 5.** As per the analysis results, it has damaged the environment.
2) The industry has claimed that it has provided multi effect evaporator but the same was not being utilized and raw spent wash was being spread on the press mud to manufacture bio-compost. Further, UASB system provided by the industry has never been utilized by the industry and it is lying defunct.
3) The industry has adopted the easy method to dispose of raw spent wash directly on the press mud to manufacture bio-compost but by adopting this technology it has damaged the environment by discharging highly contaminated effluent containing high value of organic parameters on to land for stagnation.

153

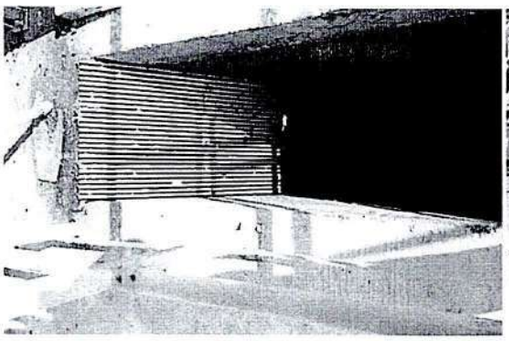

Plate-9: Screen chamber of STP

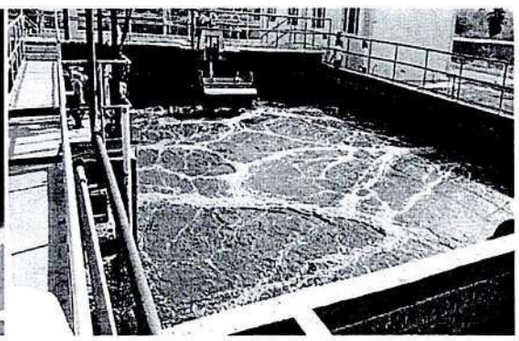

Plate-10: Aeration tank based on SBR technology in reaction mode

The overall view of STP and aeration tank in static stage are mentioned as per **Plate-11 and Plate-12.**

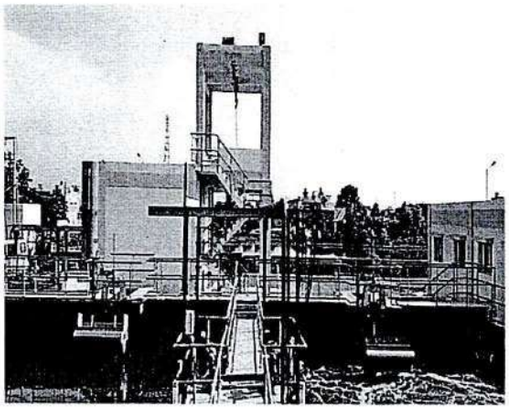

Plate-11: overall view of STP

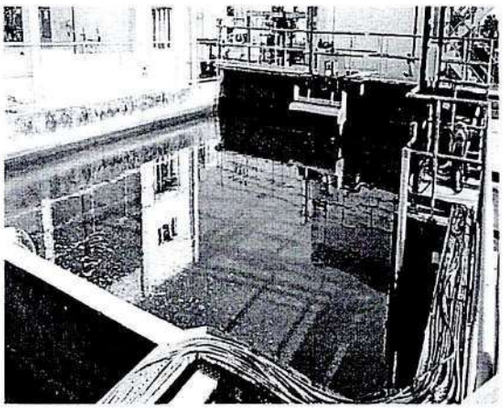

Plate-12: Aeration tank in static stage

The quality of effluent generated at the outlet of STP has been shown in the glass beaker **(Plate-13).** The color of the treated effluent of STP was slightly turbid which indicated that the quality of effluent, being generated from SBR based technology STP, was slightly poor as expected from such treatment system. Punjab Water Supply and Sewage Board needs to give more attention for the operation of STP and dose of chlorine to be added to kill the fecal coliform.

During visit to STP, Moonak, the Monitoring Committee collected the treated sewage sample and same was analyzed by HSPCB laboratory. As per the analysis results, the values of pH, BOD, COD, TSS and F.coli were observed to be 7.5 mg/l, 22 mg/l, 87.6 mg/l and 30 mg/l, respectively. The value of F.coli was observed as 1.2×10^6 MPN/100ml. These analysis results indicate that the values of BOD, COD and TSS are within the prescribed limits. The value of F.coli is quite high as compared to permissible value of 1000 MPN/100ml. Analysis report of treated sewage sample is annexed as per **Annexure-2**.

Plate-13: Treated effluent quality being shown in glass Beaker

The residents of Moonak town informed that whole of the sewage of the town is not treated in the existing STP and part of the untreated domestic effluent is discharged into a pond through a Kutcha drain, which has shown as per **Plate-14**.

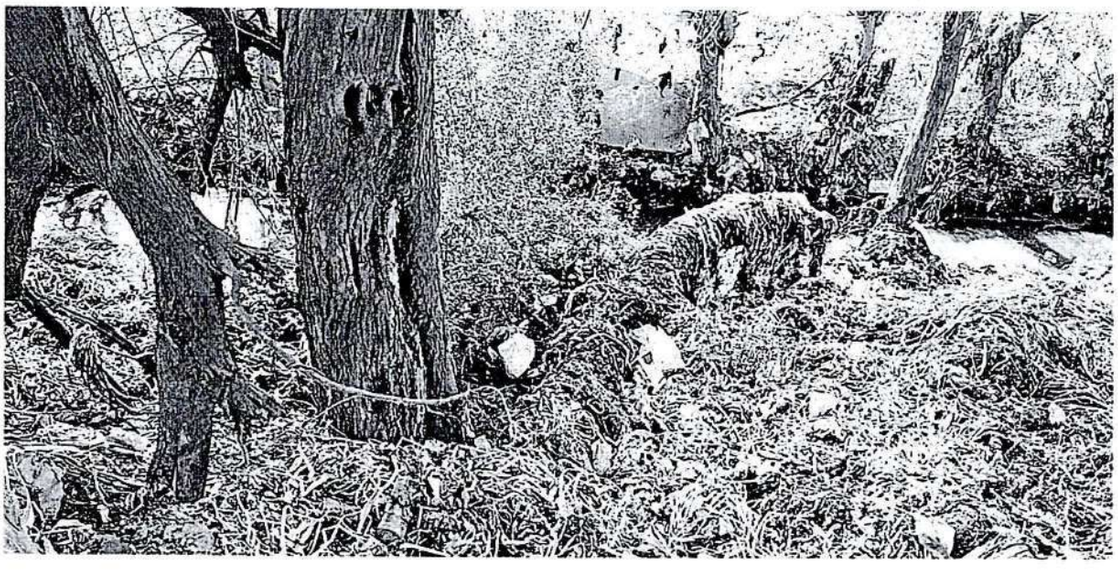

Plate-14: Photograph showing the drain carrying untreated sewage of the town Moonak further leading to the pond.

155

The untreated sewage of Moonak town is accumulated in the pond, which is mentioned as per **Plate-15 and Plate-16** given below.

Plate-15: Untreated sewage of Moonak town accumulated in the pond

Plate-16: Untreated sewage of Moonak town accumulated in the pond

After visiting the STP Moonak, the Executive Committee made its following observations:

3.1 Observations

1) Though the STP Moonak is based on new technology i.e SBR technology but its operation was not effective because the quality of the treated effluent was not clear as expected from such treatment system.
2) The capacity of STP is not sufficient to treat whole of the wastewater of Moonak town.
3) The untreated domestic sewage was being collected in a pond and is source of groundwater contamination.

3.2 Recommendations

The Executive Committee has made the following recommendations

1) As per analysis results of treated sewage sample, the value of F.coli has been observed as $1.2x10^6$ MPN/100ml against the permissible value of 1000 MPN/100ml. It indicated that the STP operating agency does not disinfect the treated sewage. Moreover, whole of domestic sewage of Moonak town not related to STP because lot of untreated sewage was found stagnated in a pond as shown in **Plates 15 and 16**.

   Therefore, the Chairman, PPCB shall impose an Environmental compensation of suitable amount on the responsible agency for the said lapses as per the provisions of the Water Act, 1974.
2) Chairman PPCB shall ask the concerned department that whole of the treated domestic sewage, conforming to the prescribed standards, is utilized for irrigation for which irrigation scheme has already been laid. No treated/untreated sewage shall be allowed to be discharged into any drain/Nallah/River Ghaggar/Pond.

156

3) The officers of PWSSB and PPCB shall jointly carry out the study w.r.t quantity of sewage generation of the town, capacity of STP already installed and gap in sewage generation and treated sewage and based on gap data, capacity of new STP to be installed by Department of Local Government/PWSSB. The study may be completed by 30.10.2019 and new STP to be installed shall be completed by 31.3.2021.

4.0 Quality of river Ghaggar water at Ghaggar bridge, Tohana

The Executive Committee collected the water sample of river Ghaggar at Ghaggar bridge, Tohana on 19.9.2019. the sample was analysed by HSPCB laboratory. Analysis results indicate that the values of TSS, BOD, COD, oil & grease, conductivity, Ammonical Nitrogen, Chloride, T.cr, H.cr, Ni, Fe and Zn were found as 26 mg/l, 24 mg/l, 102 mg/l, BDL, 1347 µs/cm, 17.36 mg/l, 106 mg/l, BDL, BDL, 0.4 mg/l, 0.05 mg/l. As per the values of these parameters, there is some improvement in the quality of river Ghaggar water. The analysis report of River Ghaggar water at Tohana is annexed as per **Annexure-3**.

Dr. V.K Hatwal
(Member)

Dr. Babu Ram
(Member)

Justice Pritam Pal
Former Judge
Punjab & Haryana High Court
(Now as Chairman of the
Executive Committee)

157

Annexure-1

Prevent Pollution

Type of Sample:-**Monitoring**

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1420
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by **Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Justice Pritampal, Dr. Babu Ram, Dr. V.K. (MoEF) and Sh. Gursharan Das Garg, EE and Sh. Gurukaran Singh, AEE of PPCB** collected from **M/s Piccadily Sugar & Allied Ind. Ltd., Patran Patiala (Village Hamjheri)** on 19/09/2019. The sample has been analysed from **20/09/2019 to 01/10/2019.**

1.	Sample Code	1607	1608
2.	Sample Collected from #	Bio compositing yard	Lagoon-I
		OBSERVATION	
1.	Appearance	Dark brown	Brown
2.	Odour	Bad	Bad

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	6.80	5.51		APHA, 4500-H+B
2.	Suspended Solid mg/l	27004.0	2804.0		APHA, 2540-D
3.	BOD mg/l	125000.0	48000.0		IS:3025(P-44)
4.	COD mg/l	264960.0	105920.0		APHA, 5220-B
5.	Oil & Grease mg/l	34.0	24.0		APHA, 5520-B
6.	Conductivity Micro S/cm	53000.0	30000.0		-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjali | JSA2 Kiran Bala | Sc-B Sukhram | Analyst Harish Chandra | **Laboratory Incharge** Rajesh Garhia

CC to **Member Secretary , PPCB, Patiala** is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer.

BDL – Below Deduction Limit.

DL – Deduction Limit.

158

Annexure-1

Prevent Pollution

Type of Sample:-**Monitoring**

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1421
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by **Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Justice Pritampal, Dr. Babu Ram, Dr. V.K. (MoEF) and Sh. Gursharan Das Garg, EE and Sh. Gurukaran Singh, AEE of PPCB** collected from **M/s Piccadily Sugar & Allied Ind. Ltd., Patran Patiala (Village Hamjheri)** on 19/09/2019. The sample has been analysed from **20/09/2019 to 01/10/2019.**

1.	Sample Code	1609	1610
2.	Sample Collected from #	Bio compositing yard	Stagnant waste water near Agriculture land
		OBSERVATION	
1.	Appearance	Dark brown	Brown
2.	Odour	Bad	Bad

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	6.34	7.79		APHA, 4500-H+B
2.	Suspended Solid mg/l	13862.0	1104.0		APHA, 2540-D
3.	BOD mg/l	72500.0	15500.0		IS:3025(P-44)
4.	COD mg/l	177760.0	40480.0		APHA, 5220-B
5.	Oil & Grease mg/l	28.0	24.0		APHA, 5520-B
6.	Conductivity Micro S/cm	44000.0	33000.0		-

Sample Collected/Not Collected by us	JSA1	JSA2	Sc-B	Analyst	**Laboratory Incharge**
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to **Member Secretary , PPCB, Patiala** is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer.

BDL – Below Deduction Limit.

DL – Deduction Limit.

Annexure- 1

Prevent Pollution

Type of Sample:-**Monitoring**

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1422
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by **Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Justice Pritampal, Dr. Babu Ram, Dr. V.K. (MoEF) and Sh. Gursharan Dass Garg, EE and Sh. Gurukaran Singh, AEE of PPCB** collected from **M/s Piccadily Sugar & Allied Ind. Ltd., Patran Patiala (Village Hamjheri)** on 19/09/2019. The sample has been analysed from **20/09/2019 to 01/10/2019.**

1.	Sample Code	1611	1612
2.	Sample Collected from #	Stagnant waste water on open land	Stagnant waste water on open land

OBSERVATION

1.	Appearance	Brown	Brown
2.	Odour	Bad	Bad

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	8.20	8.34		APHA,.4500-H+B
2.	Suspended Solid mg/l	536.0	882.0		APHA, 2540-D
3.	BOD mg/l	7350.0	7600.0		IS:3025(P-44)
4.	COD mg/l	16320.0	16960.0		APHA, 5220-B
5.	Oil & Grease mg/l	22.0	24.0		APHA, 5520-B
6.	Conductivity Micro S/cm	17120.0	17070.0		-
7.	Sodium Absorption Ratio (SAR)	4.39	4.20		-

Sample Collected/Not Collected by us	JSA1	JSA2	Sc-B	Analyst	**Laboratory Incharge**
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to **Member Secretary , PPCB, Patiala** is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer. BDL – Below Deduction Limit. DL – Deduction Limit.

Annexure-I

Prevent Pollution

Type of Sample:-**Monitoring**

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1423
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by **Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Justice Pritampal, Dr. Babu Ram, Dr. V.K. (MoEF) and Sh. Gursharan Das Garg, EE and Sh. Gurukaran Singh, AEE of PPCB** collected from **M/s Piccadily Sugar & Allied Ind. Ltd., Patran Patiala (Village Hamjheri)** on 19/09/2019. The sample has been analysed from **20/09/2019 to 01/10/2019.**

1.	Sample Code	1613	1614
2.	Sample Collected from #	Tubewell waer near cow room	Piezometer No. I near Boiler house 180' depth
		OBSERVATION	
1.	Appearance	Colourless	Turbid
2.	Odour	Mild	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	8.04	7.82		APHA, 4500-H+B
2.	Suspended Solid mg/l	BDL (DL=5)	7.0		APHA, 2540-D
3.	BOD mg/l	0.8	2.1		IS:3025(P-44)
4.	COD mg/l	17.6	19.2		APHA, 5220-B
5.	Oil & Grease mg/l	BDL (DL=2)	BDL (DL=2)		APHA, 5520-B
6.	Conductivity Micro S/cm	1170.0	1780.0		-
7.	Total Dissolved Solid mg/l	680.0	1070.0		-
8.	Chloride (as Cl) mg/l	106.0	106.0		-
9.	Total Hardness mg/l	346.0	290.0		-
10.	Calcium (as Ca) mg/l	96.0	88.0		-
11.	Magnesium (as Mg) mg/l	25.758	17.0		-
12.	Turbidity as NTU	0.5	4.0		-

Sample Collected/Not Collected by us	JSA1	JSA2	Sc-B	Analyst	**Laboratory Incharge**
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to **Member Secretary , PPCB, Patiala** is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer. BDL – Below Deduction Limit. DL – Deduction Limit.

Annexure - 1

Prevent Pollution

Type of Sample:-**Monitoring**

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1424
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by **Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Justice Pritampal, Dr. Babu Ram, Dr. V.K. (MoEF) and Sh. Gursharan Das Garg, EE and Sh. Gurukaran Singh, AEE of PPCB** collected from **M/s Piccadily Sugar & Allied Ind. Ltd., Patran Patiala (Village Hamjheri)** on 19/09/2019. The sample has been analysed from **20/09/2019 to 01/10/2019.**

1.	Sample Code	1615	1616
2.	Sample Collected from #	Piezometer No. I near Boiler House 180' depth	Lagoon No. 2
		OBSERVATION	
1.	Appearance	Turbid	Brown
2.	Odour	Mild	Bad

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.85	7.50		APHA, 4500-H+B
2.	Suspended Solid mg/l	34.0	276.0		APHA, 2540-D
3.	BOD mg/l	2.8	5800.0		IS:3025(P-44)
4.	COD mg/l	23.6	15360.0		APHA, 5220-B
5.	Oil & Grease mg/l	BDL (DL=2)	26.0		APHA, 5520-B
6.	Conductivity Micro S/cm	1783.0	18032.0		-
7.	Total Dissolved Solid mg/l	1060.0	-		-
8.	Chloride (as Cl) mg/l	108.0	-		-
9.	Total Hardness mg/l	284.0	-		-
10.	Calcium (as Ca) mg/l	80.0	-		-
11.	Magnesium (as Mg) mg/l	20.412	-		-
12.	Turbidity as NTU	29.0	-		-

Sample Collected/Not Collected by us	JSA1	JSA2	Sc-B	Analyst	**Laboratory Incharge**
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to **Member Secretary , PPCB, Patiala** is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer. BDL – Below Deduction Limit. DL – Deduction Limit.

Annexure-2

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1418
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Sh. Gursharan Das Garg, EE and Sh. Gurukaran Singh, AEE of PPCB collected from M/s 03 MLD STP SBR Technology, Moonak, Sangroor on 19/09/2019. The sample has been analysed from 20/09/2019 to 01/10/2019.

1.	Sample Code	1605
2.	Sample Collected from #	Outlet of STP

OBSERVATION

1.	Appearance	Pale Yellow
2.	Odour	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.50			APHA, 4500-H+B
2.	Suspended Solid mg/l	30.0			APHA, 2540-D
3.	BOD mg/l	22.0			IS:3025(P-44)
4.	COD mg/l	87.6			APHA, 5220-B
5.	Oil & Grease mg/l	BDL (DL=2)			APHA, 5520-B
6.	Conductivity Micro S/cm	820.0			-
7.	Total Colfirom MPN/100ml	3450000.0			-
8.	Fecal Coliform MPN/100ml	1200000.0			-

Sample Collected/Not Collected by us	JSA1	JSA2	Sc-B	Analyst	Laboratory Incharge
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to Member Secretary, PPCB, Patiala is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer. BDL – Below Deduction Limit. DL – Deduction Limit.

Annexure-3

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board's Laboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana

Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1419
Dated: 01-10-2019

Description: Received a sample on 20/09/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Vinay Gill, AEE and Smt. Poonam, AEE of the Board alongwith Sh. Gursharan Das Garg, EE and Sh. Gurukaran Singh, AEE of PPCB collected from Ghaggar River at Ghaggar Bridge , Moonak Tohana Road on 19/09/2019. The sample has been analysed from 20/09/2019 to 01/10/2019.

1.	Sample Code	1606
2.	Sample Collected from #	Ghaggar River

OBSERVATION

1.	Appearance	Yellowish
2.	Odour	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.77			APHA, 4500-H+B
2.	Suspended Solid mg/l	26.0			APHA, 2540-D
3.	BOD mg/l	24.0			IS:3025(P-44)
4.	COD mg/l	102.0			APHA, 5220-B
5.	Oil & Grease mg/l	BDL (DL=2)			APHA, 5520-B
6.	Conductivity Micro S/cm	1347.0			-
7.	Ammonical Nitrogen (as N) mg/l	17.36			-
8.	Chloride (as Cl) mg/l	106.0			-
9.	Total Chromium (as Cr) mg/l	BDL			-
10.	Hexavalent Chromium (as Cr+6) mg/l	BDL			-
11.	Nickel (as Ni) mg/l	BDL			-
12.	Iron (as Fe) mg/l	0.4			-
13.	Zinc (as Zn) mg/l	0.05			-

	JSA1	JSA2	Sc-B	Analyst	Laboratory Incharge
Sample Collected/Not Collected by us	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia
Sample Consumed in testing					

CC to Member Secretary , PPCB, Patiala is requested to release the payment for analyze the samples in the favor of HSPCB (HQ), Panchkula.

This information is provided by the field officer. BDL – Below Deduction Limit. DL – Deduction Limit.

Annexure-3

OFFICE OF THE EXECUTIVE COMMITTEE

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

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

To

The Chairman,
Punjab Pollution Control Board,
Nabha Road, Patiala

No. CEC/2019/529
Dated: 1.11.2019

Subject: **Report on visit to M/s Bhandari Export Industries Ltd., Village Sarsini, Tehsil DeraBassi, Distt. Mohali and M/s T.C Terrytex Ltd. Village Sarsini, Tehsil DeraBassi, Distt. Mohali on 1.10.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA no. 138 and 139 of 2016 in the matter of Stretch Grips Mansa's Ghaggar River (Suo Moto case) and Yogender Kumar.**

Please find enclosed herewith a report on visit to M/s Bhandari Export Industries Ltd., Village Sarsini, Tehsil DeraBassi, Distt. Mohali and M/s T.C Terrytex Ltd. Village Sarsini, Tehsil DeraBassi, Distt. Mohali on 1.10.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA no. 138 and 139 of 2016 in the matter of Stretch Grips Mansa's Ghaggar River (Suo Moto case) and Yogender Kumar for your kind information and necessary action please.

It is requested that necessary action on the recommendations made by the Executive Committee may be taken and action taken report be submitted within 21 days.

DA/ as above

(Dr. Babu Ram)
Member,
Executive Committee

Endst. No. CEC/2019/530 Dated: 1.11.2019

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

DA/ as above

(Dr. Babu Ram)
Member,
Executive Committee

Report on visit to M/s Bhandari Export Industries Ltd., Village Sarsini, Tehsil DeraBassi, Distt. Mohali and M/s T.C Terrytex Ltd. Village Sarsini, Tehsil DeraBassi, Distt. Mohali on 1.10.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA no. 138 and 139 of 2016 in the matter of Stretch Grips Mansa's Ghaggar River (Suo Moto case) and Yogender Kumar.

The Executive Committee under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab & Haryana High Court, now as Chairman of the Committee visited the following two industries on 1.10.2019.

1. M/s Bhandari export industries Ltd; Village Sarsini, Tehsil Derabassi, Distt. Mohali.
2. M/s T.C Terrytex Ltd; Village Sarsini, Tehsil Derabassi, Distt. Mohali.

The following were present during the visit:

A) Members of the Executive Committee

Sr. no.	Name and Designation	Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab & Haryana High Court	Chairman
2.	Dr. Babu Ram, Former Member Secretary, PPCB	Member

B) Officers of Punjab Pollution Control Board

Sr. no.	Name and Designation
1.	Er. Vijay Kumar, Environmental Engineer, PPCB
2.	Er. Gulshan Kumar, Asstt. Environmental Engineer, PPCB
3.	Sh. Janak Raj, Assistant Scientific Officer, PPCB

1.0 M/s Bhandari Export Industries Ltd., Village Sarsini,Tehsil DeraBassi, Distt. Mohali

1.1 Background

The industry, a large-scale dyeing unit, engaged in the manufacturing of Cotton Grey Yarn and Dyed Yarn by using Cotton Yarn and Dyes as raw material and chemicals. The manufacturing processes of the industry are Raw Material → Gray Yarn→ Opening & Cleaning→ Carding→ Combing→ Drawing→ Moving→ Spinning→ Winding→ Inspection→ Finished Products. The industry was granted consent to operate under the provisions of Water (Prevention & Control of Pollution) Act, 1974 vide no. R15SASCTOW3160301 dated 07/10/2015 having validity upto 30/06/2020 and the Air (Prevention & Control of Pollution) Act, 1981vide no. CTOA/Renewal/SAS/2018/7240539 dated 12/10/2015 having validity upto 31/03/2019.

166

The industry had also been granted Consent to Establish (NOC) for expansion of the unit for production of dyed yarn and Cotton Grey Yarn including enhancement @ 8.6 MT/day from 6.5 MT/day, respectively, vide no. CTE/exp/SAS/2019/9257277 dated 22/03/2019 having validity upto 21/03/2020.

As per the record of Punjab Pollution Control Board, the industry was visited by the officer of the Board on 14/12/2018 and observed that some pockets of plantation area stagnation of treated effluent was there, due to no provision of permanent distribution network for disposal of the treated effluent. Further, the analysis results of the effluent sample collected from the outlet of ETP showed high value of TDS parameter as 2283 mg/l, which was more than prescribed standards (2100 mg/l).

The industry was given personal hearing by the Chairman of the PPCB on 09/04/2019& the same was attended by the Managing Director of the industry and submitted that the industry has removed all the discrepancies observed by the visiting officer and also installed online TDS meter at the RO reject interlocked with the feed motor of RO in such a way that in case the concentration of TDS in the RO reject exceeds 2100 mg/l, the feed motor/ pump of RO system shall be stopped. It was decided in the hearing that the Zonal Office, Patiala shall make surprise visit to the industry and submit the report/ recommendations in the matter.

Accordingly, the officer of Zonal Office, Patiala visited the industry on 02/05/2019 and reported that the industry is re-using its RO permeate back into the process and discharging RO reject onto land for plantation inside/ outside of the industry. However, the distribution network of plantation was not adequate as some pockets was found almost dry and some were found water logged.

Thereafter, the PPCB through letter dated 13/05/2019, directed the industry to keep its plantation area to utilize its treated trade effluent uniformly and ensure that no stagnation of treated wastewater is caused in the plantation area.

PPCB, while giving the directions u/s 33-A of the Water Act, 1974 to the industry vide letter no. 1087 dated 22.2.2019, has directed it to install online continuous effluent monitoring system at the final outlet of the industry for the measurement of parameters namely flow, pH, COD, BOD, TSS by 31/05/2019 and makes it connectivity to server of SPCB and CPCB by 31/07/2019.

167

The industry through its letter dated 22/07/2019 had reported compliance of the same.

1.2 About Effluent Treatment Plant (ETP)

For the treatment of effluent of the industry, the industry has installed an effluent treatment plant (based on physico chemical treatment followed by aerobic biological and tertiary treatment) consisting of equalization tank, cooling tower, flash mixer, tubes settlers (2 no., in parallel), MBBR, suspended growth aeration tank (Activated sludge process), clarifier-I, Pre-filtration tank, sand filter, carbon filter, resin filter and Reverse Osmosis (RO) system.

1.2.1 Collection of effluent samples

The effluent samples from the various points were collected during the visit on 1.10.2019 and the analysis results are mentioned as under:

Part- A:

Sr. No.	Point of sample collection	Parameters (mg/l except pH, conductivity and SAR)						
		pH	TSS	TDS	BOD	COD	Colour (Co-Pt-Scale)	SAR
1	Collection Tank	8.2	30	1240	110	260	140	6.8
2	O/L of Primary Tube settler / clarifier	7.3	120	1832	54	180	120	12.0
3	Aeration Tank	-	-	-	-	-	-	-
4	O/L of Secondary Clarifier	7.8	15	1915	18	60	60	16.0
5	O/L of First Clarifier	8.0	15	1980	22	72	80	11.6
6	O/L of settling tank	8.1	14	1971	16	56	40	16.0
7	Final O/L leading to plantation	8.0	12	1642	10	42	15	18.0
8	RO Permeate	8.2	-	680	-	-	-	-
9	RO Reject	7.9	-	1840	-	-	-	-
10	Plantation Area 1	7.2	105	1060	42	132	160	14.0
11	Plantation area 2	8.2	80	2040	36	126	160	14
12	Cable Trench in plantation area	7.9	110	1390	46	180	180	12

Part- B:

Sr. No.	Point of sample collection	Parameters (mg/l)						
		MLSS	MLVSS	Phenolic Compound	Sulphides	T. Cr	O& G	Amn. N
1	Collection Tank	-	-	BDL	BDL	BDL	8.6	8.2
2	O/L of Primary Clarifier	-	-	BDL	BDL	BDL	5.2	6.2
3	Aeration Tank	2260	1440	-	-	-	-	-
4	O/L of Secondary Clarifier			BDL	BDL	BDL	BDL	5.8
5	O/L of First Clarifier	-	-	BDL	BDL	BDL	BDL	5.2

168

6	O/L of settling tank	-	-	BDL	BDL	BDL	BDL	6.0
7	Final O/L leading to plantation	-	-	BDL	BDL	BDL	BDL	4.8
8	RO Permeate	-	-	-	-	-	-	-
9	RO Reject	-	-	-	-	-	-	-
10	Plantation Area 1	-	-	BDL	BDL	BDL	4.6	6.4
11	Plantation area 2	-	-	BDL	BDL	BDL	BDL	5.4
12	Cable Trench in plantation area	3898	3130	BDL	BDL	BDL	BDL	8.4

The analysis report of effluent samples received from PPCB laboratory is annexed as per **Annexure-1.**

1.2.2 Discussion on the analysis results

The analysis results indicate as under:

1. The values of parameters namely pH, TSS, TDS, BOD, COD, Colour, SAR, Phenolic compound, sulphite, T.Cr, O & G and Ammonical nitrogen in the untreated effluent were found as 8.2, 30 mg/l, 1240 mg/l, 110 mg/l, 260 mg/l, 140 (Co-Pt-Scale), 6.8, BDL, BDL, BDL, 8.6 mg/l & 8.2 mg/l, respectively. The permissible limits for these parameters are pH : 6.5 to 8.5; TSS : 100 mg/l; TDS : 2100 mg/l; BOD : 30 mg/l; COD : 250 mg/l; Colour : 150 (platinum cobalt units); SAR : 26 mg/l; Phenolic compds : 1.0 mg/l; Sulphide : 2.0 mg/l; Total chrome : 2.0 mg/l; Oil and Grease : 10 mg/l; Ammonical Nitrogen : 50 mg/l. Therefore, in the untreated effluent itself all the parameters are within the prescribed limits except slight higher value of COD : 260 mg/l& BOD : 110 mg/l. The literature study [study mentioned in Journal of international academy of physical science Vol.15 No.2 (2011) by Lav Varma and Jyoti Sharma, Deptt. of chemistry, Raj Rishi Govt. college, Alwar, Rajasthan] indicates that the values of BOD, COD, TSS & TDS in the untreated effluent would have been near to 350 mg/l, 770 mg/l, 270 mg/l and 2352 mg/l, respectively.

2. The values of BOD, COD, TSS and TDS at the outlet of primary clarifier have been observed as 54 mg/l, 180 mg/l, 120 mg/l and 1832 mg/l. Treatment efficiency in terms of removal of BOD, COD and TSS has been observed to be 50.9%, 30.7%, and 0 % (removal of TSS in the primary clarifier cannot be 0 %). The value of TSS in the untreated effluent was 30 mg/l and in the primary treated effluent, it was 120 mg/l, which is unusual and impossible. **It indicates that the industry has made some arrangements in the collection tank to store the diluted effluent.**

169

3. For further treatment of effluent having BOD : 54 mg/l; COD : 180 mg/l; TSS : 120 mg/l; aerobic biological treatment system has been provided. The values of these parameters (BOD, COD & TSS) after the said treatment have been observed as 18 mg/l, 60 mg/l & 15 mg/l, respectively. With the lower value of BOD as 54 mg/l, aerobic biological treatment system may give much treatment efficiency as there is little food in the aeration tank and there is lower concentration of MLVSS as 1440 mg/l in the aeration tank.

4. The values of BOD, COD, TSS and TDS at the outlet of the secondary clarifier, outlet of first clarifier and outlet of settling tank were found to be varied between 16 - 22 mg/l, 56-72 mg/l, 14-15 mg/l & 1915-1980 mg/l.

5. At the final outlet of effluent treatment plant, the parameters were observed as BOD : 10 mg/l; COD : 42 mg/l ; TSS : 12 mg/l and TDS : 1642 mg/l, which are within the permissible limits of 30 mg/l; 250 mg/l, 100 mg/l and 2100 mg/l, respectively.

6. The effluent samples collected from the plantation area and cable trench, passing through plantation area, were also analyzed for all the parameters. For the parameters namely BOD, COD, TSS, TDS and Colour, the values were found as BOD : 42-46 mg/l, TSS : 105-110 mg/l and Colour 160-180 (Co. Pt. Scale), which are higher than the permissible limits of BOD : 30 mg/l, TSS : 100 mg/l and Colour : 150 (Co. Pt. Scale). The analysis results of the parameters (BOD, COD, TSS, TDS and Colour) in the effluent lying in the plantation area and in the cable trench were almost matching. It means that the effluent lying in the plantation area seems to be seeped into cable trench resulting into filling of whole length of cable trench with wastewater.

7. The treatment efficiency in terms of removal of TDS in RO system has been observed to be 58.6%. In the reject of RO system, the value of TDS was observed as 1840 mg/l, which is within the permissible limits of 2100 mg/l.

1.2.3 Other observations

1. The colour the effluent at the final outlet of effluent treatment plant leading to plantation area was colourless but the colour of the effluent lying in the plantation area-I, plantation area-II and cable trench was light brown, brownish yellow and bluish, respectively. The analysis results of the effluent samples collected from these points also confirm the statement that BOD at the final outlet of effluent treatment plant was 10 mg/l, whereas, in the plantation area and in cable trench **(Plates-1 and 2),** its level was observed as 42-46 mg/l (higher than the

170

permissible limits of 30 mg/l) and colour was found as 160-180 (Co. Pt. Scale) (higher than the permissible limits 150 (Co. Pt. Scale).

Plate-1: Effluent lying filled in cable trench passing through plantation area

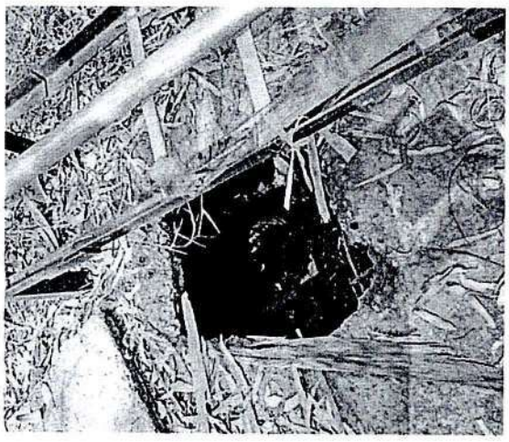

Plate-2: Effluent lying filled in cable trench passing through plantation area

2. The prescribed standards for the parameters at the outlet of effluent treatment plant for discharge on the land for plantation are pH : 6.5 to 8.5; TSS : 100 mg/l; TDS : 2100 mg/l; BOD : 30 mg/l; COD : 250 mg/l; Colour : 150 (platinum cobalt units); SAR : 26 mg/l; Phenolic compounds : 1.0 mg/l; Sulphide : 2.0 mg/l; Total chrome : 2.0 mg/l; Oil and Grease : 10 mg/l; Ammonical Nitrogen : 50 mg/l. The analysis results of untreated effluent sample collected from the collection tank indicate that all the parameters except BOD: 110 mg/l and COD: 260 mg/l are already within permissible limits, which is unusual and unacceptable. Even the value of TSS in the untreated effluent was found as 30 mg/l against the permissible values of 100 mg/l.

It indicates that the industry has made some arrangements to store the diluted effluent in the collection tank (Inlet to ETP).

3. The literature study [study mentioned in Journal of international Academy of physical science Vol.15 No.2 (2011) by Lav Varma and Jyoti Sharma, Deptt. of chemistry, Raj Rishi Govt. college, Alwar, Rajasthan] indicates that the values of BOD, COD, TSS & TDS in the untreated effluent have been mentioned as 350 mg/l, 770 mg/l, 270 mg/l and 2352 mg/l, respectively. Also, the perusal of the record of PPCB indicates that value of TDS has been observed to be varied between 2283 mg/l to 3800 mg/l in the untreated effluent. Thus, the value of TDS in the untreated effluent determined as 1240 mg/l is not acceptable.

These facts also indicate that the industry has made arrangements to store the diluted effluent in the collection tank (inlet to ETP).

4. The concentration of pH, TSS, TDS, BOD, COD, Colour, SAR, Phenolic Compound, Sulphides, T.Cr, O&G, Amn.N at final outlet of ETP leading to plantation was found as 8.0, 12 mg/l, 1642 mg/l, 10 mg/l, 42 mg/l, 15 co-pt-scale, 18, BDL, BDL, BDL,

171

BDL, 4.8 mg/l against the prescribed standard of 6.5-8.5, 100 mg/l, 2100 mg/l, 30 mg/l, 250 mg/l, 150 (platinum cobalt units, 26, 1.0 mg/l, 2.0 mg/l, 2.0 mg/l, 10mg/l, 50 mg/l), which are within the permissible limits.

5. The concentration of parameters namely pH, TSS, TDS, BOD, COD, Colour, SAR, Phenolic Compound, Sulphides, T.Cr, O&G, Amn.Nin the cable trench passing through plantation area was found as 7.9, 110 mg/l, 1390 mg/l, 46 mg/l, 180 mg/l, 180 co-pt-scale, 12, BDL, BDL, BDL, BDL, 8.4 mg/l against the prescribed standard of 6.5-8.5, 100 mg/l, 2100 mg/l, 30 mg/l, 250 mg/l, 150 (platinum cobalt units), 26, 1.0 mg/l, 2.0 mg/l, 2.0 mg/l, 10mg/l, 50 mg/l, respectively.

   The analysis results indicate that the values of TSS, BOD and Colour in the effluent lying in cable trench, are beyond permissible limits.

6. The concentration of pH, TSS, TDS, BOD, COD, Colour, SAR, Phenolic Compound, Sulphides, T.Cr, O&G, Amn.N at in Plantation Area-1 was found as 7.2, 105 mg/l, 1060 mg/l, 42 mg/l, 132 mg/l, 160 co-pt-scale, 14, BDL, BDL, BDL, 4.6 mg/l, 6.4 mg/l against the prescribed standard of 6.5-8.5, 100 mg/l, 2100 mg/l, 30 mg/l, 250 mg/l, 150 (platinum cobalt units), 26, 1.0 mg/l, 2.0 mg/l, 2.0 mg/l, 10mg/l, 50 mg/l.

   The analysis results indicate that the values of TSS, BOD and Colour in the effluent applied on to land for plantation are beyond the permissible limits.

7. The concentration of pH, TSS, TDS, BOD, COD, Colour, SAR, Phenolic Compound, Sulphides, T.Cr, O&G, Amn.N at in Plantation Area-2 was observed to be 8.2, 80 mg/l, 2040 mg/l, 36 mg/l, 126 mg/l, 160 co-pt-scale, 14, BDL, BDL, BDL, BDL, 5.4 mg/l against the prescribed standards of 6.5-8.5, 100 mg/l, 2100 mg/l, 30 mg/l, 250 mg/l, 150 (platinum cobalt units), 26, 1.0 mg/l, 2.0 mg/l, 2.0 mg/l, 10mg/l, 50 mg/l.

   The analysis results indicate that the values of BOD and Colour in the effluent applied on to land for plantation are beyond the permissible limits.

8. The distribution system of treated effluent in the plantation area was non uniform. In some pockets of the plantation area stagnation of effluent was observed **(Plate-3)** and some pockets of plantation were found dry.

Plate-3: Stagnation of effluent in plantation area

1.3 Recommendations :

In view of the analysis results of the effluent samples collected from various points, discussion on the analysis results and observations of the committee, the following recommendations are made:

1. Chairman, PPCB shall initiate the following action under the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

   a) Impose an environment compensation amounting to Rs. 25 lakh upon the industry and the said amount may be utilized for restoration of quality of environment.

   b) Issue directions to the industry that it shall operate its effluent treatment plant efficiently & effectively and the treated effluent conforming to the standards shall be discharged in well developed plantation area with proper distribution network in such a way that the treated wastewater is utilized properly. The treated effluent conforming to the standards may be allowed to be discharged onto land for plantation provided the concentration of TDS is always below the permissible value of 2100 mg/l, otherwise, the industry shall install multi effect evaporator followed by dryer and the dried sludge may be sent to TSDF, Nimbua.

   c) The industry shall install OCEMS at the inlet to ETP by 31.01.2020 to monitor the parameters namely pH, BOD, COD, TSS & TDS so that the effluent with actual concentration of the parameters may enter into effluent treatment plant.

With regard to environment compensation to be imposed on the polluter, the Hon'ble NGT in para no. 16 of its order dated 16.7.2019 in OA no. 916 of 2018 in the matter of Sobha Singh and Others V/s State of Punjab has ordered as under:

> *"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."*

2. The industry shall maintain monthly water balance statement stating the quantity of underground water withdrawal, quantity of water used in the different processes, wastewater generation, sludge generation during the treatment, quantity of wastewater passed through RO system, quantity permeate and rejects, quantity of water recycled into the processes and the quantity of treated wastewater discharged.

3. The industry shall dispose off its sludge from physico chemical treatment, secondary clarifier sludge and other waste material in an environmentally sound manner.

4. The industry shall carry out analysis of ground water and soil samples in the plantation area twice in a year to assess the characteristics of underground water and soil.

5. PPCB shall depute a team of officers of PPCB under the supervision of senior level officer in 3rd week of Nov, 2019 to analyze the quality of untreated and treated effluent w.r.t. all the parameters including TDS parameter by conducting 24 hours comprehensive study and submit comments as to whether RO reject can be allowed to be discharged in the plantation area or it requires evaporation and drying by providing Multi Effect Evaporator

174

followed by dryer and need to send the dried sludge to TSDF, Nimbuan. Thereafter, PPCB may take action accordingly under information to the Executive Committee.

2.0 M/s T.C. Terrytex Ltd., Vill. Sarsini, Tehsil DeraBassi, Distt. Mohali.

The Executive Committee visited M/s T.C. Terrytex Ltd., Vill. Sarsini, Tehsil DeraBassi, Distt. Mohali on 01.10.2019 and the report is submitted as under:

2.1 Background

The industry, a large-scale dyeing unit, engaged in the manufacturing of Terry Towel and Dyed Yarn by using Cotton Yarn as raw material. The manufacturing processes of the industry involves processes- Raw Material →Gray Yarn →Opening & Cleaning →Carding →Combing →Drawing →Moving →Weaving → Dyeing →Drying →Finished Products. The industry was granted consent to operate under the provisions of Water (Prevention & Control of Pollution) Act, 1974 vide no. R15SASCTOW3146713 dated 12/10/2015 and the Air (Prevention & Control of Pollution) Act, 1981vide no. R15SASCTOA3146652 dated 12/10/2015, both having validity upto 30/06/2020.

As per the record of Punjab Pollution Control Board, the industry was visited by the officer of the Board on 05/12/2018 and observed stagnation of treated wastewater in some pockets of plantation area developed by the Industry, due to no provision of permanent distribution network for disposal of the same. Further, the analysis results of the sample collected from the stagnation area showed the value of TDS as 2690 mg/l, BOD :42 mg/l and Sulphide : 24 mg/l, which are higher than the permissible limits.

The industry was given personal hearing by the Chairman of the PPCB on 09/04/2019, wherein it was decided that the Zonal Office shall make surprise visit to the industry to carry out the effluent sampling for three parameters TDS, BOD & Sulphide. Accordingly, the officer of Zonal Office, PPCB, Patiala visited the industry on 02/05/2019, collected the effluent samples as per the decision of the personal hearing. The analyzed results show that the industry was not meeting with the prescribed standard for TDS parameter i.e. 2100 mg/l.

Thereafter, the PPCB through letter dated 28/05/2019, directed the industry to install automatic sensor based TDS analysis meter within 15 days at the final outlet of ETP (leading to plantation), which shall be interlocked with RO

operation and incase, the TDS parameters raised from 2100 mg/l, it shall automatically shut down the RO.

The industry was issued directions u/s 33-A of the Water Act, 1974 regarding installation of online continuous effluent monitoring system at the final outlet of the industry for the measurement of parameters like flow, pH, COD, BOD, TSS by 31/05/2019 and connected to the server of SPCB and CPCB by 31/07/2019.

2.2 Effluent Treatment Plant (ETP)

For the treatment of effluent, the industry has installed an effluent treatment plant, consisting of anaerobic tank, equalization tank, flash mixer, primary clarifier, aeration tank-I, aeration tank-II, secondary clarifier, treated water tank, sand filter, carbon filter, decanter, de-watering sludge and Reverse Osmosis system. The treated effluent is discharged onto land for plantation.

2.3 Collection of effluent samples

The Executive Committee after visiting the various components of effluent treatment plant, collected the effluent samples from various points and these samples were got analyzed from PPCB and the analysis results are given as under:

Table-2: Analysis results of effluent samples

Part- A:

Sr. No.	Point of sample collection	Parameters (mg/l except pH)						
		pH	TSS	TDS	BOD	COD	Colour Co-Pt-Scale	SAR
1	I/ L of Anaerobic tank	7.10	126	1633	340	1050	300	14.4
2	O/L of Anaerobic tank	7.20	95	1620	280	834	200	13.6
3	Aeration tank- I	-	-	-	-	-	-	-
4	O/L of Primary Clarifier	7.4	66	1788	120	380	30	15.6
5	Aeration Tank- 2	-	-	-	-	-	-	-
6	O/L of Secondary Clarifier	8.2	42	1690	26	160	20	12.0
7	Feed to RO plant-1 (1500 KLD)	8.3	18	1672	22	148	15	11.6
8	RO Plant-1 (1500 KLD) Permeate	7.9	-	1280	-	-	-	-
9	RO Plant-1 (1500 KLD) Reject	7.9	-	2024	-	-	-	-
10	Final O/L leading to plantation	8.1	28	1940	28	176	20	12
11	Plantation area	7.9	88	1680	42	216	60	8.0
12	Aeration Tank 3	-	-	-	-	-	-	-
13	Feed to RO Plant-2(1000 KLD)	8.0	21	1624	23	152	15	9.8
14	RO Plant-2 (1000 KLD)	7.9	-	1264	-	-	-	-
15	RO Plant-2 (1000 KLD) Reject	7.9	-	2051	-	-	-	-

Part- B:

Sr. No	Point of sample collection	Parameters (mg/l except pH)						
		MLSS	MLVSS	Phenolic	Sulphides	T.	O&	Amn.

176

.				Compound		Cr	G	N
1	I/L of Anaerobic tank	-	-	-	-	-	-	-
2	O/L of Anaerobic tank	-	-	-	-	-	-	-
3	Aeration tank- I	4550	3170	-	-	-	-	-
4	O/L of Primary Clarifier	-	-	BDL	4.0	BDL	8.0	10.6
5	Aeration Tank- 2	4210	3520	-	-	-	-	-
6	O/L of Secondary Clarifier	-	-	BDL	BDL	BDL	BDL	5.5
7	Feed to RO plant-1(1500 KLD)	-	-	BDL	BDL	BDL	BDL	3.8
8	RO Plant-1 (1500 KLD) Permeate	-	-	-	-	-	-	--
9	RO Plant-1 (1500 KLD) Reject	-	-	-	-	-	-	-
10	Final O/L leading to plantation	-	-	BDL	BDL	BDL	BDL	5.2
11	Plantation area	-	-	BDL	BDL	BDL	BDL	5.4
12	Aeration Tank 3	3898	3130	-	-	-	-	-
13	Feed to RO Plant (100 KLD)	-	-	BDL	BDL	BDL	BDL	4.0
14	RO Plant (100 KLD)	-	-	-	-	-	-	-
15	RO Plant (100 KLD) Reject	-	-	-	-	-	-	-

The analysis report is annexed as per **Annexure-2**

2.3.1 Discussion on the analysis results and observations

The analysis results of the effluent samples, as mentioned in Table-2 (Point no. 2.2 above) indicate as under:

1. The values of TSS, TDS, BOD, COD, Colour and SAR in the untreated effluent (at the inlet of anaerobic tank) were found to be 126 mg/l; 1633 mg/l 340 mg/l, 1050 mg/l, 300 (platinum cobalt scale) and 14.4, respectively.

2. As per analysis report, the values of TSS, BOD & COD have been reduced to 95 mg/l, 280 mg/l & 834 mg/l at the outlet of the anaerobic tank indicating the treatment efficiency of anaerobic tank as 24.6%, 17.6% and 20.6% in terms of removal of TSS, BOD & COD, respectively.

3. The values of TSS, BOD & COD were found further reduced to 66 mg/l, 120 mg/l & 380 mg/l at the outlet of the primary clarifier giving treatment efficiency of physico chemical treatment as 30.5%, 57.1% & 54.4%, respectively, in terms of removal of TSS, BOD and COD parameters.

4. At the outlet of the secondary clarifier, provided after aerobic biological treatment system consisting of aeration tank-1 and aeration tank-2, the values of TSS, BOD and COD were further reduced to 42 mg/l, 26 mg/l and 160 mg/l. The treatment efficiency of aerobic biological treatment system in terms of removal of TSS, BOD and COD was observed as 36.4%, 78.3% and 57.9%, respectively.

5. The concentration of TDS at the inlet of RO system-1 was 1672 mg/l, whereas, at its outlet, its concentration in the permeate was 1280 mg/l and in the RO reject, it

177

was found as 2024 mg/l. The treatment efficiency of RO system-1 in terms of removal of TDS was 23.4%.

6. The concentration of TDS in the effluent at the inlet of RO system-2 was 1624 mg/l and in the permeate, its value was 1264 mg/l and in the RO reject, it was 2052 mg/l. The treatment efficiency in terms of removal of TDS parameter in RO system-2 was observed to be 22.2%.

7. As per the literature study [study mentioned in Journal of international Academy of physical science Vol.15 No.2 (2011) by Lav Varma and Jyoti Sharma, Deptt. of chemistry, Raj Rishi Govt. college, Alwar, Rajasthan], the values of BOD, COD, TSS and TDS in the untreated effluent have been mentioned as 350 mg/l, 770 mg/l, 270 mg/l and 2352 mg/l, respectively. Also the perusal of record of PBCB indicates that the value of TDS has been observed to be varied between 2852 mg/l to 6140 mg/l. Thus, the value of TDS in the untreated effluent of the industry may be higher than 2100 mg/l, whereas, it has maintained TDS level below 1700 mg/l in the untreated effluent.

   Thus, the industry has made some arrangements in the system to keep the value of TDS in the untreated effluent below 1700 mg/l so that in any case its value in RO reject may not cross the permissible value of 2100 mg/l. Thus, there is need to carry out the detailed study by a senior officer of PPCB to assess the concentration of TDS at the point of its generation.

8. The analysis results of the effluent sample collection from the plantation area indicate the value of BOD as 42 mg/l, which is higher than the prescribed limits of 30 mg/l.

9. In some pockets of the plantation area, stagnation of effluent was observed **(Plates-4 and 5).** Therefore, the industry needs to apply treated effluent, conforming to the prescribed standards, uniformly onto land for plantation with proper distribution network to ensure that no stagnation of treated effluent is occurred in any case.

Plate-4: Stagnation in plantation area

Plate-5: Stagnation in plantation area

178

2.4 Recommendations

In view of the analysis results of the effluent samples collected from various points, discussion on the analysis results and observations of the committee, the following recommendations are made:

1. Chairman, PPCB shall initiate the following action under the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

   a) Impose an environment compensation amounting to Rs. 25 lakh upon the industry and the said amount may be utilized for restoration of quality of environment.

   b) Issue directions to the industry that it shall operate its effluent treatment plant efficiently & effectively and the treated effluent conforming to the standards shall be discharged in well developed plantation area with proper distribution network in such a way that the treated wastewater is utilized properly. The treated effluent conforming to the standards may be allowed to be discharged onto land for plantation provided the concentration of TDS is always below the permissible value of 2100 mg/l, otherwise, the industry shall install multi effect evaporator followed by dryer and the dried sludge may be sent to TSDF, Nimbua.

   c) The industry shall install OCEMS at the inlet to ETP by 31.01.2020 to monitor the parameters namely pH, BOD, COD, TSS & TDS so that the effluent with actual concentration of the parameters may enter into effluent treatment plant.

   With regard to environment compensation to be imposed on the polluter, the Hon'ble NGT in para no. 16 of its order dated 16.7.2019 in OA no. 916 of 2018 in the matter of Sobha Singh and Others V/s State of Punjab has ordered as under:

   "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

179

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."

2. The industry shall maintain monthly water balance statement stating the quantity of underground water withdrawal, quantity of water used in the different processes, wastewater generation, sludge generation during the treatment, quantity of wastewater passed through RO system, quantity permeate and rejects, quantity of water recycled into the processes and the quantity of treated wastewater discharged.

3. The industry shall dispose off its sludge from physico chemical treatment, secondary clarifier sludge and other waste material in an environmentally sound manner.

4. The industry shall carry out analysis of ground water and soil samples in the plantation area twice in a year to assess the characteristics of underground water and soil.

5. PPCB shall depute a team of officers of PPCB under the supervision of senior level officer in 3rd week of Nov, 2019 to analyze the quality of untreated and treated effluent w.r.t. all the parameters including TDS parameter by conducting 24 hours comprehensive study and submit comments as to whether RO reject can be allowed to be discharged in the plantation area or it requires evaporation and drying by providing Multi Effect Evaporator followed by dryer and need to send the dried sludge to TSDF, Nimbuan. Thereafter, PPCB may take action accordingly under information to the Executive committee.

Dr. Babu Ram
Member

Justice Pritam Pal 6.11.19.
Former Judge,
Punjab & Haryana High Court,
Now as Chairman of the Executive Committee

180

Annexure -1

Ten

PUNJAB POLLUTION CONTROL BOARD, NABHA ROAD, PATIALA

FORM- X

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 69-80
Dated 16.10.2019

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 02th day of October, 2019 from Sh.Vinod Kumar, FA, samples of M/s Bhandari Export Industries Ltd Vill. Sarsini. Tehsil Dera-bassi, Distt SAS Nagar for analysis. The samples were in a condition fit for analysis reported below:-

I further certify that I have analysed the aforementioned samples from 02.10.2019 to 16 10.2019 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.

Sr. NO.	Point of Sample collection	pH	TSS mg/l	TDS mg/l	BOD mg/l	COD mg/l	Colour Co-Pt-Scale	SAR	MLSS mg/l	MLVSS mg/l	Phenolic Compds mg/l	S" mg/l	T.Cr mg/l	O & G mg/l	Amm.N mg/l
1	Collection Tank	8.2	30	1240	110	260	140	6.8	-	-	BDL	BDL.	BDL.	8.6	8.2
2	Plantation Area 1	7.2	105	1060	42	132	160	14.0	-	-	BDL	BDL.	BDL.	4.6	6.4
3	O/L of Secondary Clarifier	7.8	15	1915	18	60	60	16.0	-	-	BDL.	BDL.	BDL.	BDL.	5.8
4	O/L of Primary Tube Settler	7.3	120	1832	54	180	120	12.0	-	-	BDL.	BDL.	BDL.	5.2	
5	Aeration Tank	-	-	-	-	-	-	-	2260	1440	-	-	-	-	-
6	O/L of first clarifier	8.0	15	1980	22	72	80	11.6	-	-	BDL	BDL.	BDL	BDL.	5.2
7	O/L of setting tank	8.1	14	1971	16	56	40	16.0	-	-	BDL.	BDL.	BDL.	4.8	6.0
8	Final O/l leading to plantation	8.0	12	1642	10	42	15	18.0	-	-	BDL.	BDL.	BDL.	BDL.	4.8
9	RO Permeate	8.2	-	680	-	-	-	-	-	-	-	-	-	-	-
10	RO Reject	7.9	-	1840	-	-	-	-	-	-	-	-	-	-	-
11	Plantation Area2	8.2	80	2040	36	126	160	14	-	-	BDL.	BDL.	BDL.	BDL.	5.4
12	Cable Trench in plantation area	7.9	110	1390	46	180	180	12	-	-	BDL	BDL	BDL	BDL	8.4

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

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

Seals & fastenings of the containers were found intact.
Signed this 16sl day of October, 2019
Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

Kiran Jasuja
(Signature) 16/10/19
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office-,SAS Nagar

Authorisation Letter No.- Dated -

Endst No. 32144-45 dt. 18/10/2019

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, Patiala.

Kiran Jasuja
(Signature) 16/10/19
State Board Analyst

Punjab Pollution Control Board

Details to be supplied for the collection of sample

Part –A

1	Name & Address of the industry	M/s Bhandari Export Industries Ltd. (Now YCD Industries Ltd) Vill. Sarsini, Tehsil Derabassi, Distt. SAS Nagar
2	Raw Material used	cotton yarn/ polyster fibre @ 9.5 MTD Dyes @ 0.09 MTD
3	(i) Product: Cotton Grey yarn @ 8.6 MTD or Dyed yarn @ 4.5 MTD & Cotton grey yarn @ 4.1 MTD	
	(ii) Processes involved: Blow room → Carding → Preparatory → spinning → winding → Dyeing → Rewinding → Ready packing	
4	(i)Give the name of the process in operation at the time of sampling: All processes are in operation	
	(ii)The no. of wastewater streams from different processes along with discharge of each: All leading to 1 to ETP	
5	Sample no. (if more than one sample collected)	Sample no. 1 to 12
	(i) Quantity of industrial effluent discharge/hr (in litres)	~ 9 m³/hr
	(ii)Is the discharge of industrial effluent continuous or intermittent and if intermittent, day & time of its discharge	continuous
	(iii) Is the quantity & quality of industrial effluent from different streams uniform throughout or not	non-uniform
	(iv) Present method of disposal industrial effluent	onto land for plantation
6	(i) Working Hrs: 24 hrs	(ii)Closed days: National / State Holidays
7	No. of outlets through which industrial effluent is discharged /carried outside the industry: Nil	8 Name of the occupants/representative of the industry with designation present at the time of sampling: Sh. Sanjeev Sharma G.M. Engg.
9	Process not working at the time of sampling & why?: All are in operation	
10	Parameters to be analyzed	Sample no. (1, 2, 3, 4, 6, 7, 8, 11 & 12) pH, TSS, TDS, BOD, Color, SAR, Phenolic Compounds, COD, Ammonical N, Sulphides, T. Cr, & O&G Sample no. 5 - MLSS, MLVSS Sample no. 9, 10 - pH, TDS
11	Sample preserved for (tick):	
	(i)Organic parameter (freeze below 40°C)	(iii) Cyanide(ph>1 with NaOH) / (v) Others
	(ii)Metals (pH<2 with HNO)	(iv) O&G: 1 lt Glass bottle-
12	Detail visual report of Water & Air	clear weather
13	(i)Name the component of ETP / STP which were working: collection tank → Flash Mixture → Tube Settler → Aeration (2 nos in series) → Secondary clarifier (1 nos) → Tube settler → Pre-filtration tank → RO Plant → Permeate → Reuse RO Plant → Reject → onto land for plantation	

	(ii) If any component was not working: None				
14	Date of collection of sample	01/10/19	Time of collection of sample	11:00 Am to 1:10 PM	
15	Temperature (°C): (a) Air:	~ 28°C	(b)Water	–	
16	Colour & Odour of sample	Given in remarks column			
17	Type of sample collected / (grab/·)	Grab.			
18	Point of sample collection	Given in remarks column			

19 Remarks:

Sr. No.	Sample no.	Point of sample collection	Colour & odour of sample	Temp.
	1	Collection Tank	Pinkish	~32°C
	2	Plantation Area. 1	Light brown	~26°C
	3	O/L of secondary clarifier	Greyish Tinge	~29°C
	4	O/L of Primary Tube Settler	Yellowish Tinge	~30°C
	5	Aeration Tank	Brown	~30°C
	6	O/L of First Clarifier	Greyish Tinge	~30°C
	7	O/L of Setting tank	Greyish Tinge	~28°C
	8	Finial O/L leading to plantation	colorless	~27°C
	9	RO Permeate	colorless	~26°C
	10	RO Reject	colorless	~27°C
	11	Plantation Area. 2	Brownish Yellow	~26°C
	12	Cable Trench in plantation area	Bluish.	~26°C

Note: Monitoring of the industry has been carried out by NGT team headed by Justice Bikram Pal

The sample of the trade effluent of M/s Bhandari Export Industries Ltd. from the point mentioned at sr. no. 18 above was collected in the presence of Sh. Sanjeev Sharma occupier G.M. Engg.) representative of the industry / placed in dry and empty container after explaining the revisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to the No request to send the sample to the State Water Laboratory under section 52(i) of the said Act has been made by occupier / representative of the industry. The sample was stirred and placed in dry bottle/dry containers and sealed _____ bearing inscription of AEE.

1. Justice Bikram Pal, Chairman, NGT committee	3. E. Vijay Kumar, AEE EG, PPCB
2. Dr. Babu Ram. Member NGT Committee	4. E. Gulshan Kumar AEE PPCB

5. Sh. Janak Raj, ASO. 6. Sh. Sanjeev Sharma, GM Engg.

Signature of the occupier / representative of the industry with designation 1/10/19	Signature of the Officer / Official collecting the sample

Received sealed / unsealed and preserved sample on 02.10.19 at 9.30 AM through Sh. Vinod Kumar, FA

Board Analyst

Notice of intention to have sample analysed under Section 21 of the Water

(Prevention & Control of Pollution) Act.1974

(See Sub-Rule 28)

To

M/s Bhandari Export Industries Ltd {Now YCD Industries Ltd}

Vill. Sarsini - Tehsil Derabassi

Distt. SAS Nagar

Take notice that it is intended to have analysed the sample of Water/Sewage/Trade effluent which is being taken today the First day of October 2019

from(I)

various points

Gulshan Kumar, AEE, PPCB

Name and designation of the
Person who takes the Sample
on behalf of NGT Team

(I) Here specify the stream, Well, Plant Vessel or place from where the sample is taken.

Name and designation of the
Person receiving the notice

Sh. Sanjeev Sharma GM Engg.

Copy received.

1/10/19

Annexure-2

Ten

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 2nd day of October, 2019 from Sh. Vinod Kumar, FA, samplesof M/s T.C.Terytex Ltd, Vill. Sarsini tehsil Derabassi. Distt SAS Nagar for analysis. The samplewas in a condition fit for analysis reported below:-

I further certify that I have analysed the aforementioned samples from 02.10.2019 to 12.10.2019 and dec..re 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 Sample collection	pH	TSS mg/l	TDS mg/l	BOD mg/l	COD mg/l	Colour Co-Pt-Scale	SAR	MLSS mg/l	MLVSS mg/l	Phenolic Compound mg/l	Sulphides mg/l	T.Cr mg/l	O & G mg/l	Amn.N mg/l
1	I/L of Anaerobic tank	7.10	126	1633	340	1050	300	14.4	-	-	-	-	-	-	-
2	O/L of Anaerobic tank	7.20	95	1620	280	834	200	13.6	-	-	-	-	-	-	-
3	Aeration tank-1	-	-	-	-	-	-	-	4550	3710	-	-	-	-	-
4	O/L of Primary Clarifier	7.4	66	1788	120	380	30	15.6	-	-	BDL	4.0	BDL	8.0	10.6
5	Aeration Tank-2	-	-	-	-	-	-	-	4210	3520	-	-	-	-	-
6	O/L of Secondary Clarifier	8.2	42	1690	26	160	20	12.0	-	-	BDL	BDL	BDL	BDL	5.5
7	Feed to RO plant I D 1500 KID	8.3	18	1672	22	148	15	11.6	-	-	BDL	BDL	BDL	BDL	3.8
8	RO Plant I 0 1500 Kld Permeate	7.9	-	1280	-	-	-	-	-	-	-	-	-	-	-
9	RO Plant I 00 1500 Kld Reject	7.9	-	2024	-	-	-	-	-	-	-	-	-	-	-
10	Final O/L leading to plantation	8.1	28	1940	28	176	20	12	-	-	BDL	BDL	BDL	BDL	5.2
11	Plantation area	7.9	88	1680	42	216	60	8.0	-	-	BDL	BDL	BDL	BDL	5.4
12	Aeration Tank 3	-	-	-	-		-	-	3898	[illegible]	-		-	-	
13	Feed to RO Plant 2001000KLD	8.0	21	1624	23	152	15	9.8	-	-	BDL	BDL	BDL	BDL	4.0
14	RO Plant 2001000 KLD Permeate	7.9	-	1264	-	-	-	-	-		-	-	-	-	-
15	RO Plant 200 1000 KLD Reject	7.9	-	2051	-	-	-	-	-	-	-	-	-	-	-

Note : 1) All the results are in mg/l except pH, Colour, 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 14 day of October, 2019
Address:-
Punjab Pollution Con trol Board
Vatavaran Bhawan, Nabha Road,
Patiala

Meenu 14/10/19
(Signature)
State Board Analyst

To
The Environmental Engineer,
Punjab Pollution Control Board
Regional Office,Mohali

Authorisation Letter No.- Dated -

Endst No. 31678 dt. 14-10-19

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, Patiala.

Meenu/14/10/19
(Signature)
State Board Analyst

Data Sheet-Effluent

Punjab Pollution Control Board

Details to be supplied for the collection of sample

Part –A

1	Name & Address of the Industry	M/s T.C. Terryfex Ltd. Vill Sarsini Tehsil Derabassi, Distt. S.A.S. Nagar
2	Raw Material used	cotton yarn @ 15TPD Dyes @ 175 kg/day
3	(i) Product: Terry towel @ 14TPD	
	(ii) Processes involved: Weaving → Dyeing → Finishing.	
4	(i)Give the name of the process in operation at the time of sampling: All process are in operation	
	(ii)The no. of wastewater streams from different processes along with discharge of each: All leading to 1 to ETP	

5	Sample no. (if more than one sample collected)	Sample no. 1 to 15	
	(i) Quantity of Industrial effluent discharge/hr (in litres)	~ 25-30 m^3/hr	
	(ii)Is the discharge of industrial effluent continuous or intermittent and if intermittent, day & time of its discharge	continuous	
	(iii) Is the quantity & quality of industrial effluent from different streams uniform throughout or not	non-uniform	
	(iv) Present method of disposal industrial effluent	onto land for plantation area - 40 acres	
6	(i) Working Hrs: 24 hrs	(ii)Closed days: National / State Holidays	
7	No. of outlets through which industrial effluent is discharged /carried outside the industry: One O/L leading to plantation area developed o/s premises of Ind.	8	Name of the occupants/representative of the industry with designation present at the time of sampling: Sh. P.S. Barnala, Unit Head
9	Process not working at the time of sampling & why?: NA.		
10	Parameters to be analyzed	Sample no. 1, 2 → pH, TSS, TDS, BOD, COD, colour, SAR Sample no. 8, 5, 12 → MLSS, MLVSS Sample no 4, 6, 7, 10, 11, 13 → pH, TSS, TDS, BOD, colour, SAR, COD, Ammonical Nitogen, phenolic compounds, Sulphides, T.Cr, O&G. Sample no 8, 9, 14, 15 → pH, TDS	

11	Sample preserved for (tick):		
	(i) Organic parameter (freeze below 40°C)	(iii) Cyanide(ph>1 with NaOH)	(v) Others
	(ii)Metals (pH<2 with HNO)	(iv) O&G: 1 lt Glass bottle- freeze	
12	Detail visual report of Water & Air	Clear weather	

13 (i)Name the component of ETP / STP which were working:

Anaerobic tank → (collection tank) → Flash Mixer → Floculator → Primary clarifier → Aeration 1, 2, 3 → Secondary clarifier → Clear water tank → O.S.B → S.B.F

S.B.F → R.O → Permeate → Reuse

R.O → Reject → onto land for plantation

186

	(ii) If any component was not working: Stand by tube settler,				
14	Date of collection of sample	01/10/19	Time of collection of sample	03:30 PM to 5:15 PM	
15	Temperature (°C): (a) Air:	~ 28°C	(b)Water	Given in remarks column	
16	Colour & Odour of sample	Please see remarks column			
17	Type of sample collected (grab/)	Grab			
18	Point of sample collection	Please see remarks column			

19	Remarks: Sample no.	Point of sample collection	Color & odour of sample	Temp
	1.	I/L of Anaerobic tank.	Dark Purple & unpleasant	~40°C
	2.	O/L of Anaerobic tank	Light Purple	~ 31°C
	3.	Aeration tank - 1	Dark grey	~ 31°C
	4.	O/L of Primary clarifier	Greyish light turbid	~ 30°C
	5.	Aeration tank - 2	Dark grey	~ 31°C
	6.	O/L of secondary clarifier	Light yellow	~ 30°C
	7.	Feed to RO plant 1 @ 1500 KLD	Light turbid	~ 30°C
	8.	RO plant 1 @ 1500 KLD 'Permeate'	colorless	~ 29°C
	9.	RO plant 1 @ 1500 KLD 'Reject'	Light turbid	~ 29°C
	10.	Final O/L leading to plantation	light yellow	~ 27°C
	11.	Plantation area	light yellow	~ 26°C
	12.	Aeration tank 3	Dark grey	~ 30°C
	13.	Feed to RO Plant 2 @ 1000 KLD	colorless	~ 38°C
	14.	RO plant 2 @ 1000 KLD - Permeate	colorless	~ 29°C
	15.	RO plant 2 @ 1000 KLD Reject	light yellow	~ 29°C

Note: Monitoring of Ind. has been carried out by the NGT team headed by Justice Pritam Pal

The sample of the trade effluent of M/s T.C. Terrytex Ltd, Sarsini from the point mentioned at sr. no. 18 above was collected in the presence of Sh. P.S. Barnala, Unit Head ~~occupier~~ representative of the industry / placed in dry and empty container after explaining the revisions of section 21 of the Water (Prevention & Control of Pollution) Act, 1974 to the No request to send the sample to the State Water Laboratory under section 52(i) of the said Act has been made by occupier / representative of the industry. The sample was stirred and placed in dry bottle/dry containers and sealed bearing inscription of AEE.

1. Justice Pritam Pal - Chairman NGT Committee	3. Er. Ujjay Kumar, Xen PPCB
2. Dr. Babu Ram - Member NGT Committee	4. Er. Gulshan Kumar, AEE, PPCB

5. Sh. Janak Raj - AEO

6. Sh. P.S. Barnala, Unit Head

1/10/2019

Signature of the occupier / representative of the industry with designation	Signature of the Officer / Official collecting the sample 1/10/19

Received sealed / ~~un~~sealed and preserved sample on 2/10/19 at 9AM

through Sh. Vinod Kumar P.A.

2/10/19

Board Analyst

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

(See Sub-Rule 28)

To

M/s T.C. Terrytex Ltd.
Vill. Sarsini, Teh. Derabassi
Distt. S.A.S. Nagar

Take notice that it is intended to have analysed the sample of Water/Sewage/Trade effluent which is being taken today the First day of October 2019 from(I)

various points

1/10/19
E. Gulshan Kumar, AEE PPCB
Name and designation of the Person who takes the Sample on behalf of NGT Team

(I) Here specify the stream, Well, Plant Vessel or place from where the sample is taken.

Name and designation of the Person receiving the notice
Sh. P.S. Barnala Unit Head
Received copy 1/10/2019

Annexure-4

OFFICE OF THE EXECUTIVE COMMITTEE

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

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

To

The Chairman,
Himachal Pradesh Pollution Control Board,
Shimla,

No. CEC/2019/540
Dated: 14.11.2019

Subject: **Report on visit to the industries of Kala Amb Area (Himachal Pradesh) on 15.10.2019 by the Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Strench Grips Mansa's River Ghaggar and Yogendera Kumar.**

Please find enclosed herewith a report on visit to the industries of Kala Amb Area (Himachal Pradesh) on 15.10.2019 by the Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Strench Grips Mansa's River Ghaggar and Yogendera Kumar.

It is requested that the necessary action on the recommendations made by the Executive Committee in the case of each industry may be taken and action taken report be submitted within 21 days.

DA/as above

(Dr. Babu Ram)
Member,
Executive Committee

Report on visit to the industries of Kala Amb Area (Himachal Pradesh) on 15.10.2019 by the Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Strench Grips Mansa's River Ghaggar and Yogendera Kumar.

The following were present during the visit:

a) **Members of the Executive Committee**

Sr. No.	Name and Designation	Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab & Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, Former Member Secretary, PPCB	Member
4.	Sh. V.K. Hatwal, Scientist 'D', MoEF&CC	Member

b) **Officers of Himachal Pradesh Pollution Control Board**

1. Dr. M.M. Sharma, Senior Scientific Officer
2. Sh. Avinash Kumar Sharda, Environmental Engineer, Regional Office, Paonta Sahib.

1.0 Visit to the industries

The Executive Committee visited the industries of Kala Amb area which fall in the catchment area of river Ghaggar. The following industries were visited by the Committee:

1.1 M/s Ruchira Papers Limited, Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmaur (HP)

1.1.1 Background

M/s Ruchira Papers Limited, Trilokpur Road, Kala Amb, Tehsil Nahan, Distt. Sirmaur has following two units in the same premises.

i) M/s Ruchira Papers Limited (Kraft paper manufacturing division)

ii) M/s Ruchira Papers Limited (Writing and Printing Paper Manufacturing division).

1.1.1.1 My Ruchira papers Ltd., (Kraft paper Manufacturing Divison)

The record of Himachal Pradesh Pollution Control Board indicates that in the kraft paper manufacturing division of the industry, it manufactures 52800 TPA kraft paper by using Indian waste Paper @ 100 TPD, Imported Waste Paper @ 20 TPD and Agro Residue i.e. wheat straw, bagasse, sarkanda @ 100 TPD. The manufacturing processes for waste paper processing are ~~are~~ pulping, screening, centi cleaner, refining and stock preparation. For processing of wheat straw / bagasse, the manufacturing processes are cooking, blowing, delkor washing, brown stock washing, refining and stock preparation. After refining both of these

190/

materials are processed for pressing, drying and rewinding. The water consumption for paper machine, pulp mill and boiler is 5625 m^3/day and the quantity of effluent generated is 4925 m^3/day. The industry has claimed that it has installed full-fledged effluent treatment plant to take care of process requirement of water. The industry has further claimed that the upgradation of existing ETP is not required as the effluent generation will be reduced after proposed modification and change in the product mixed and the existing ETP facilities are sufficient to meet the required standards / norms. The hazardous waste generation from the unit has been mentioned as used / spent oil and the same is sent to M/s Shivalik Solid Waste Management, Nalagarh, Distt. Solan. The ETP sludge is sold to be board manufacturer.

1.1.1.2 M/s Ruchira papers ltd (Writing and printing paper division).

The record of Himachal Pradesh Pollution Control Board indicates that in the writing and printing paper manufacturing division, it manufactures 4195.8 MT/month writing and printing paper by using wheat straw, bagasse, sarkanda etc as raw material and Soap Stone, Caustic Soda, Lime, Hydrated Lime, Hydrogen Peroxide, Sodium Chlorate and GCC as chemicals. The hazardous waste generation is 190 Ltr/annum of used oil and the same is sent to the common hazardous waste treatment and disposal site. For Manufacturing of writing and printing paper, the processes involved are raw material preparation, mixing of raw material with cooking chemicals in digester and subjected to heat at particular temperature and pressure, disintegration into brown stock, pulp screening, Pulp washing, pulp bleaching and paper making.

During visit, it was observed that industry has two sets of Effluent Treatment Plant (ETP), one ETP is known as old ETP which consists of collection tank, primary clarifier, aeration tank and secondary clarifier. The representative of the industry claimed that it recycles the treated effluent but the committee has its observations that it may discharge its effluent into drain which is just on the bank of the final clarifier and there is intermingling of internal drainage of the industry with the adjoining drain (Jattan wala Nallah).

In the second set of ETP (known as new ETP), the components of ETP are equalization tank, save-all, primary clarifier, aeration tank and secondary clarifier. Besides, it has installed one big lagoon of large volume to store the effluent. The new effluent treatment plant is also on the bank of the drain and there is quite possibility that it may discharge its untreated effluent into Jattan wala Nallah. For the treatment of black liquor, it has installed chemical recovery plant to recover caustic soda. The industry in its letter dated 25.10.2019 addressed to the Environmental Engineer, Himachal Pradesh Pollution Control Board, Paonta Sahib (HP) has mentioned that it has proposal to upgrade its effluent treatment plant

and in the proposed upgradation, the industry shall install anaerobic and aerobic treatment for improvement in the water quality. In the aerobic treatment, it has proposed to install Jet Aerators and Liquid Oxygen combination.

1.1.2 Collection of effluent sample

The Executive Committee during its visit to the industries on 15.10.2019, collected the effluent samples from various points and the analysis results of the same are mentioned as per Table 1 given below.

Table 1: Analysis results of effluent samples.

Sr. No.	Parameters	From the drain within premises claimed as back flow of the main drain	Jattan wala Drain carrying effluent of the industry	Outlet of secondary clarifier (wet washing recycling)	Outlet of Wet washing clarifier-I	Outlet of Secondary clarifier	Recycling System	Outlet of ETP into drain (New ETP)	Aeration tank (Old ETP)	Aeration Tank (New ETP)
1.	PH	7.3	7.4	7.7	5.8	7.0	7.6	7.2	--	--
2.	COD mg/l	328	251	1849	2964	304	1641	216	--	--
3	BOD mg/l	68	39	405	850	56	325	34	--	--
4	TSS mg/l	115	96	123	295	146	139	88	--	--
5.	*MLSS mg/l	--	--	--	--	--	--	--	2740	3280

The analysis results of the effluent samples are annexed as per Annexure -1

1.1.3 Discussion on the analysis results and observations

The analysis results of the effluent samples collected from the outlet of the wet washing clarifier -I indicate that the values of COD, BOD and TSS were found to be 2964 mg/l, 850 mg/l and 295 mg/l, respectively. At the outlet of the secondary clarifier, the values of these parameters (COD, BOD and TSS) were observed as 1849 mg/l, 405 mg/l and 123 mg/l, respectively.

The analysis results of the effluent sample collected from the drain within the premises of the industry claimed as backflow of the main drain indicate the value of COD, BOD & TSS as 328 mg/l, 68 mg/l & 115 mg/l, respectively. The values of COD, BOD and TSS are higher than the permissible limits of 250 mg/l, 30 mg/l and 50mg/l, respectively.

The values of the parameters namely COD, BOD and TSS in the effluent sample collected from the Jattan Wala Nallah carrying effluent of the industry were

192

observed as 251 mg/l, 39 mg/l and 96 mg/l, respectively. The analysis results indicate that parameters namely COD, BOD and TSS are higher than the permissible limits of 250 mg/l, 30 mg/l and 50 mg/l, respectively.

At the outlet of the secondary clarifier, the values of COD, BOD & TSS were observed as 304 mg/l, 56 mg/l and 146 mg/l, respectively. The values of these parameters are higher than the permissible limits of 250 mg/l, 30 mg/l and 50 mg/l, respectively.

The values of parameters namely COD, BOD & TSS at the outlet of the effluent treatment plant leading to drain were observed as 216 mg/l, 34 mg/l & 88 mg/l, respectively. The values of BOD and TSS are higher than the permissible limits of 30 mg/l and 50 mg/l, respectively.

It is mentioned here that the discharge of the effluent of the industry is into Jattanwala Nallah leading to Markanda River further leading to River Ghaggar. As such, the effluent discharged by the industry with high values of COD, BOD and TSS is contributing pollution load in Jattan Wala Nallah and further into Markanda River and ultimately into river Ghaggar. The effluent with higher values of COD, BOD and TSS may affect the aquatic life and cause damage to the environment.

1.1.4 Recommendations

In view of the analysis results of the parameters namely COD, BOD and TSS, which are higher than the permissible limits and observations of Executive Committee as mentioned above, the following recommendations are made :

Chairman Himachal Pradesh Pollution Control Board shall take action to issue following directions under the provisions of the Water (Prevention and control of pollution) Act, 1974.

1. Revoke the consent to operate granted to both the unit I and unit II of the industry under the provision of the Water (Prevention and control of pollution) Act, 1974.
2. To impose an Environment Compensation amounting to Rs. 50 lakh separately each on unit -1 and unit -2 of the industry for damaging the environment and aquatic life. The said amount may be utilized for rejuvenation the quality of environment.
3. To reduce the production capacity of units 1 and unit 2 of the industry by 20%.
4. Chairman, HPPCB shall issue directions under the provisions of the Water Act, 1974 to the industry that it shall not discharge its effluent into drain / Jattan Wala Nallah/river and shall make some alternative arrangements such as utilization of treated effluent for irrigation /plantation. The industry shall change the mode of

disposal of treated effluent from Jattan Wala Nallah to land for irrigation / plantation within 3 months.

5. The industry shall upgrade its effluent treatment plant within 3 months to achieve the standards prescribed by the regulatory authority .
6. The Industry shall construct a masonry wall of 3m height toward the drain so as to rule out any possibility of discharge of effluent into the drain and shall make clear demarcation between the components of effluent treatment plant and the drain and there should be no intermingling of internal drainage system of the industry (unit I and unit II) with the main drain (Jattan Wala Nallah) by 31.12.2019.

2.0 Sarv Boi lab pvt. Ltd. Trilokpur road, kala Amb, Tehsil Nahan, District Sirmour, HP

As per record of Himachal Pradesh Pollution Control Board, the industry was commissioned in the year 2008 and is engaged in the manufacturing of pharmaceutical products. The manufacturing processes of the industry are extraction of herbs, increase in solids by concentrating in an evaporation system, removal of organic matter or oily matter, pH adjustment, paste formation, reaction with suitable reaction mixture, distillation, filtration, centrifuging, drying and blending. The effluent in the industry is generated from various processes, floor washing, leakages and spillages. As per the record, effluent treatment plant of capacity 30 KLD, consisting of collection tank, chemical dosing system, Primary tube settler, aeration tank and secondary tube settler, pressure sand filter and activated carbon filter has been installed.

2.1 Visit to the industry

The Executive Committee visited the industry on 15-10-2019 and observed that physico chemical treatment components and aerobic biological treatment components were in operation, whereas activated carbon filter and pressure sand filter were not in operation. During visit, the Executive Committee collected the effluent samples from the inlet and outlet of effluent treatment plant.

2.1.1 Collection of Effluent samples

The analysis result of the effluent samples collected from inlet to effluent treatment plant (ETP) and outlet of secondary clarifier are mentioned as per Table-2 given below:

Table-2 : Analysis results of effluent samples

Sr. No	Parameters	Untreated effluent Sample	Outlet of Secondary Clarifier
1.	pH	5.6	8.2
2.	TSS, mg/l	392	17
3.	COD, mg/l	2400	64
4.	BOD, mg/l	1290	15

194

5.	Bio-Assay	0% Survival	0% Survival
6.	Hg, mg/l	BDL	BDL
7.	T.Cr, mg/l	0.1	BDL
8.	Cn, mg/l	BDL	BDL
9.	As,mg/l	BDL	BDL
10.	Phenolic compound, mg/l	BDL	BDL
11.	S, mg/l	16	6.0
12.	PO_4,mg/l	12	5.0
13.	Pb, mg/l	BDL	BDL

The analysis results of effluent samples are annexed as per **Annexure-2.**

2.1.2 Discussion on the analysis results and Observations.

The Analysis results indicate that in the untreated effluent sample, the values of TSS, COD, BOD, Sulphide, Phosphate were observed as 392 mg/l, 2400 mg/l, 1290 mg/l, 16 mg/l and 12 mg/l, respectively. The values of mercury, Cyanide, Arsenic, Phenolic compound and lead were not detected. The value of total chromium was found as 0.1 mg/l. With regard to Bio-Assay test, there was 0% survival of fish in 100% effluent in 96 hours.

In the treated effluent sample, collected from the outlet of secondary clarifier, the values of TSS, COD and BOD were observed as 17 mg/l, 64 mg/l and 15 mg/l, respectively. The values of mercury, cyanide, arsenic, phenolic compound, lead and total chromium were not detected. The values of sulphide and phosphate were observed as 6 mg/l and 5 mg/l, respectively.

Considering the values of the parameters at the inlet and outlet of effluent treatment plant (without activated carbon and sand filter), the treatment efficiency in terms of removable of COD, BOD and TSS has been observed as 97.3%, 98.8% and 95.7%, respectively. It is mentioned here that no physico chemical treatment and single stage aerobic biological treatment system can remove COD, BOD and TSS to the level of 97.3%, 98.8% and 95.7%, respectively. However, Bioassay test indicate that there is 0% survival of fish in 100% effluent in 96 hours in both the untreated and treated effluent samples. The reduction in sulphide concentration has been found as 62.5%. However, the value of sulphide in the treated effluent has been observed as 6 mg/l.

The analysis results of the treated effluent samples without activated carbon and pressure sand filter indicate that there was 0% survival of fish in 100% effluent in 96 hours against the permissible values of 90% survival of fish in 100% effluent in 96 hours. Also, the value of sulphide has been found as 6 mg/l, which is higher than the permissible limits of 2 mg/l.

2.2 Recommendations:

Keeping in view of the analysis results of effluent samples and observations of the Executive Committee, the following recommendations are made

Chairman Himachal Pradesh Pollution Control Board shall take action to issue following directions under the provisions of the Water (Prevention and control of pollution) Act, 1974

1. Revoke the consent to operate under the provision of the the Water (Prevention and control of pollution) Act, 1974.
2. To impose an Environment Compensation amounting to Rs. 20 lakh on the industry for damaging the environment and aquatic life by way of discharging partially treated effluent, not conforming to the standards, into Jattawala nallah leading to Markanda river The said amount may be utilized for rejuvenation of the quality of environment.
3. To reduce the production capacity of the industry by 20%. The industry shall upgrade its effluent treatment plant to achieve the prescribed standards within 3 months.
4. The industry shall not discharge its treated / untreated effluent into drain/nallah/river and it shall make some alternative arrangements for disposal of treated effluent within 3 months.
5. Chairman Himachal Pradesh Pollution Control Board shall depute a team under the supervision of senior level officer of the Board to conduct comprehensive study of the industry for 24 hours on 15.12.2019 to assess performance of physico chemical treatment and aerobic biological treatment system and submit its report to the Board for further action under intimation to the Executive Committee.

Dr.V.K. Hatwal,
Member

Dr.Babu Ram,
Member

Urvashi Gulati
Member

Justice Pritam Pal, Former Judge,
Punjab & Haryana High Court
(Now as Chairman of the Executive Committee)

196

Annexure - J

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

TC-7045

1. Laboratory Sample No.	E 1294-1302/ H.O.Lab. Monitoring/201
2. ULR No.	TC70451800000000 1521P
3. Name of Industry	M/s. Ruchira papers Ltd. Trilokpur Road, Kala amb, Teh Nahan, Distt Sirmaur, Himachal Pradesh
4. Name of Sample collecting Officer	Dr. M.K.Sharma,Sr. Scientific Officer, HSPCB,
5. Designation of officer authorizing Test	Member, Executive Committee
6. Type of Sample	Grab
7. Date &Time of Sample collection	15.10.19
8. Date &Time of Sample receipt in Lab.	16.10.19
9. Period of Analysis	16.10.19 to 24.10.19
10.Test Methods	As per relevant parts of IS:3025/IS:1622 & Method of APHA

Results

As per the annexure attached

*Not covered under the scope of NABL

---End of Report---

30/10/19
Analyzed by

30/10/19
o/c Scientific Officer

Endst. No: 33345 Dt. 31/10/2019

A copy of the above is forwarded to Dr. Babu Ram, Member, Executive Committee, Office of Executive Committee, Tower no. 5, 4th Floor, Forest Complex, Sector -68, SAS Nagar for information and further necessary action please.

30/10/19
o/c Jr. Scientific Officer

197

Annexure

Sr. No.	Parameters	From the drain within premises claimed as back flow of the Main drain	Jittanwala Drain carrying Effluent of the Industry	Outlet of Secodary clarifier (wet washing recycling)	Outlet of Wet washing Clarifier-1	Outlet of Secondary clarifier	Recycling System	Outlet of ETP into Drain (New ETP)	Aeration Tank (Old ETP)	Aeratio Tank (New ETP)
1	pH	7.3	7.4	7.7	5.8	7.0	7.6	7.2	-	-
2	Chemical Oxygen Demand mg/l	328	251	1849	2964	304	1641	216	-	-
3	Bio-chemical Oxygen Demand mg/l	68	39	405	850	56	325	34	-	-
4	Total Suspended Solids mg/l	115	96	123	295	146	139	88	-	-
5	*MLSS mg/l	-	-	-	-	-	-	-	2740	3280

1. *Not covered under the scope of NABL
2. Results of AOX awaited from M/s SAI Labs Patiala

30/10/19

Annexure-5

OFFICE OF THE EXECUTIVE COMMITTEE

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

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

To

The Chairman,
Chandigarh Pollution Control Committee,
Chandigarh

No. CEC/2019/561
Dated: 28.11.2019

Subject: **Report on visit to the industries of Chandigarh area on 8.11.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River V/s State of Punjab & Others.**

Please find enclosed herewith a report on visit to the industries of Chandigarh area on 8.11.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River V/s State of Punjab & Others for your kind information and necessary action.

It is requested that the necessary action on the recommendations made by the Executive Committee in the case of each industry may be taken and action taken report be submitted within 15 days.

DA/as above

(Dr. Babu Ram) 28/11/2019
Member,
Executive Committee

Report on visit to the industries of Chandigarh area on 8.11.2019 by the Executive Committee constituted by Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Stench Grips Mansa's Secred Ghaggar River V/s 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 & Haryana High Court	Chairman
2.	Dr. Babu Ram, Former Member Secretary, PPCB	Member
3.	Dr. V. K. Hatwal, Scientist 'D', MOEF & CC	Member

B) Officers of Chandigarh Pollution Control Committee

1. Sh. Vivek Pandey, Scientist 'B'

C) Officers of Haryana Pollution Control Board

Sr. no.	Name and Designation
1.	Sh. Raj Kumar, Scientist
2.	Sh. Ashwani Kumar, Asstt. Environmental Engineer

1.0. Visit to the industries:

The Executive Committee visited the following industries on 8/11/2019:

1.1. M/s Ashoka Furniture Udyog, Plot no. 304, Phase-II, Industrial Area, Chandigarh:

1.1.1 Background

As per record of CPCC, the industry is a small scale red category unit and is engaged in the manufacturing of steel furniture @ 200 pieces/day by using MS pipes / CRC pipes, Rexene and Foam as raw material. After manufacturing of steel furniture, the processes of chrome and nickle plating are carried out. The industry has been granted consent to operate under the provisions of the Water Act, 1974 vide no. CPCC/RSEP/2541/2015/655/1822 dated 13/7/2015 valid upto 31/12/2019 for the discharge of treated trade effluent @ 0.5 KLD into sewer. For the treatment of trade effluent, it has installed an effluent treatment plant consisting of reaction-cum-settling tank and sludge drying in a tray. It has also been granted authorization under the provisions of the Hazardous Waste Management Rules, 2016 vide no. CPCC/RSEP/2541/2015/527/ 1822 dated 13/7/2015 valid upto 31/12/2019. The quantity of sludges generated from the electroplating process and ETP, which are covered under category 12.8 and 34.3, respectively, have been mentioned as 50

200

Kg/year. The hazardous waste is sent to TSDF, Nimbua as per the agreement made by the industry with TSDF, Nimbuan.

1.1.2 Collection of effluent sample:

In order to assess the performance of effluent treatment plant, the Executive Committee, in the presence of officers of Chandigarh Pollution Control Committee (CPCC) and officers of Haryana State Pollution Control Board (HSPCB), collected the untreated and treated effluent samples of the industry as the ETP of the industry was not in operation and the same was sent to Haryana State Pollution Control Board (HSPCB) Laboratory for analysis. The analysis results as received from HSPCB are annexure as per **Annexure-1**. These analysis results are mentioned as per Table-1 given below:

Table-1: Analysis results of the effluent samples

S.N.	Parameter	Value (in mg/l except pH and conductivity)	Permissible limit
1.	pH	5.04	6.0-9.0
2.	TSS	250	100
3.	COD	63.2	250
4.	Oil & Grease	4	10
5.	Conductivity, µs/cm	18730	--
6.	T.Cr.	725.1	2.0
7.	Hexa Chromium	520	0.1
8.	Ni	177.04	3.0
9.	Iron	1.228	3.0
10.	Zinc	20.776	5
11.	Copper	0.41	2

1.1.3. Discussion on the analysis results:

The analysis results indicate that the value of pH, TSS, oil and grease, T.Cr. Hexa Chromium, Nickle, Iron, Zinc and copper were observed as 5.04, 250 mg/l, 4.0 mg/l, 725.1 mg/l, 520 mg/l, 177.4 mg/l, 1.228 mg/l, 20.776 mg/l and 0.41 mg/l, respectively. The value of conductivity was observed as 18730 µs/cm which is almost equal to 0.65 x 18730 mg/l i.e. 12174 mg/l as TDS. Therefore, the values of TSS, TDS, T.Cr, Hexa Chrome, Nickle, and Zinc are higher then the permissible limits. The values of pH is also not with in the permissible limits.

201

1.1.4 Observations and recommendations:

The Executive Committee during its visit to the industry on 8/11/2019 observed that ETP of the industry was not in operation and no effluent was there in the reaction-cum-settling tank. The various parameters in the untreated effluent sample, collected from the industry, as mentioned above, have been found much higher than the permissible limits.

In view of the above, the Executive Committee has made the following recommendations:

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :
   - i) To impose an environment compensation amounting to Rs.15 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.
   - ii) To revoke consent to operate granted under the provisions of Water Act, 1974.
   - iii) To revoke authorisation granted under the provisions of the Hazardous Waste Management Rules, 2016
   - iv) To issue directions under the provisions of the Water Act, 1974 for closure of the industry.
   - v) To issue directions to the industry that it shall operate its effluent treatment plant effectively and efficiently at all the times to meet with the standards prescribed by the CPCC and ETP may be upgraded within 3 months.
   - vi) The sludge generated from the operation of effluent treatment plant shall be dried properly, packed in HDPE bags and dispose off the same to TSDF Nimbuan.
   - vii) The industry shall maintain daily record of water used in the processes of the industry, wastewater discharge and quantity of sludge generated during the operation of the effluent treatment plant.
   - viii) The industry shall maintain proper record of chemicals used for treatment of effluent mentioning the total quantity of each chemical available before treatment, quantity of chemicals used in the treatment of effluent and balance quantity of chemical after the completion of the treatment process.
   - ix) The industry shall submit water balance statement to CPCC and CPCC shall verify the said statement to ensure that the

202

wastewater discharge may commensurate with the quantity of water used in the process.

1.2 M/s Avon Rims Pvt. Ltd., Plot no. 69, Industrial Area, Phase-I, Chandigarh:

1.2.1. Background:

As per record of CPCC, the industry is engaged in the manufacturing of bicycle rims about 1.25 lac pieces/month. The quantity of effluent generated by the industry has been mentioned as 50 m^3/day. For the treatment of effluent of the industry, it has installed an effluent treatment plant based on physico chemical treatment (collection tank, reaction tank, setting tank) and the quantity of hazardous waste generation from the processes and effluent treatment plant is 4160 Kg/year. As per the record maintained by the industry, on an average, it generates hazardous sludge about 20 Kg/day. However, the record indicates that the industry is consistently entering 20 kg/day of hazardous sludge in the register, which seems to be a fabricated the record to match with the total quantity of hazardous sludge generated per year.

It has been granted consent under the provisions of the Water Act, 1974 vide no. CPCC/RSEP/0191/2018/77/1089 dated 6/8/2018 valid upto 30/9/2023. It has also been granted authorization under the provisions of the Hazardous Waste management rules, 2016 vide no. CPCC/RSEP/0191/2018/48/1089 dated 6/8/2018 valid upto 30/9/2023. The said authorization has been granted for the disposal of sludge covered under category 35.3, 12.8 and 5.1 of Schedule-I. For the disposal of the hazardous waste, it has made an agreement with TSDF namely M/s Ramky Enviro Engineers Ltd., Dera Bassi, Mohali.

1.2.2. Collection of effluent sample:

In order to assess the performance of the effluent treatment plant, the Executive Committee thought that the effluent samples of untreated and treated effluent may be collected but during the visit, it was observed that neither the industry nor effluent treatment plant, based on batch treatment (Physico-chemical-treatment), were in operation. Therefore, the members of the Executive Committee decided not to collect the effluent samples because the operation of the industry was yet to be started and effluent generation may be after the completion of the electroplating process of the industry. Thus, the effluent samples were not collected.

203

1.2.3. Recommendations of the Executive Committee:

Since on the day of visit, the effluent samples of the industry could not be collected, therefore, the Executive Committee recommends that Chairman, CPCC shall depute a team of officers of CPCC along with officer of MOEFF&CC to carry comprehensive study of processes the industry and treatment mechanism w.r.t manufacturing processes of the industry, source of generation of effluent, quantification of effluent of each stream, technology provided to treat the electroplating effluent and any other effluent and the performance of the effluent treatment plant. The team shall quantify the generation of hazardous sludge and its corroboration with the quantity of effluent treated in the treatment system as the industry is consistently entering 20kg/day of hazardous sludge in the register which seams to be a fabricated record to match with the total quantity of hazardous sludge generated per year.

The status of installation of OCEMS and CCTV cameras on the important components of the effluent treatment plant and their connectivity with CPCB and CPCC may also be reported by the team.

The Team shall check the compliance of condition of consent granted to the industry under the provisions of Water Act, 1974, Air Act, 1981 and authorization under the Hazardous Waste Management (HWM) Rules, 2016. The authenticity of frequency of disposal of Hazardous Waste to TSDF and total quantity of hazardous sludge lifted in a year w.r.t quantity of hazardous waste generated in the year may be ascertained.

The team shall submit its detailed report along with recommendations within 21 days to the Chairman, CPCC under intimation to the Executive Committee. Further, the Chairman CPCC shall take necessary action on the recommendations of the team within 15 days and action taken report be submitted to the Executive Committee within next 7 days.

1.3. M/s Atul Industries, Plot no. 799, Industrial Area, Phase-II, Chandigarh:

1.3.1 Background:

As per record of CPCC, the industry is a small scale red category unit. It is engaged in the manufacturing of M.S. screws. The manufacturing processes involved are hardening and zinc plating. The quantity of effluent

204

generation is about 1.3 KLD. For the treatment of effluent, it has installed an effluent treatment plant based on physico chemical treatment. The treated effluent is discharged into Municipal sewer. It has been granted consent under the provisions of the Water Act, 1974 vide no. CPCC/RSEP/2131/2019/160/3241 dated 13/11/2019 valid upto 30/11/2024. It has also been granted authorization under the provisions of the Hazardous Waste management Rules, 2016 vide no. CPCC/RSEP/0127/2019/121/3241 dated 13/11/2019 valid upto 30/11/2024. The quantity of sludge, covered under category no. 35.3 and 12.8 of Schedule-I, has been mentioned as 130 Kg/year and the quantity of used oil, covered under category no. 5.1 of Schedule-I, has been mentioned as 20 litres/year.

1.3.2. Collection of effluent sample:

In order to assess the performance of the effluent treatment plant of the industry, the sample of treated effluent was collected and the same was sent to Haryana State Pollution Control Board (HSPCB) Laboratory for analysis. The analysis results, as received from HSPCB, are annexed as per **Annexure-2**. These analysis results are mentioned in Table-2 given below:

Table-2: Analysis results of the effluent samples

S.N.	Parameter	Value (in mg/l except pH and conductivity)	Permissible limit
1.	pH	7.85	6.0-9.0
2.	TSS	48	100
3.	COD	1667.2	250
4.	Oil & Grease	6.5	10
5.	Conductivity, µs/cm	17440	--
6.	T.Cr.	BDL	2.0
7.	Hexa Chromium	BDL	0.1
8.	Ni	BDL	3.0
9.	Iron	0.714	3.0
10.	Zinc	0.257	5
11.	Copper	0.09	2

1.3.3. Discussion on the analysis results:

The analysis results indicate that the value of TSS, Oil and grease, T.Cr. Hexa Chromium, Nickle, Iron, Zinc and copper were observed as 48 mg/l, 6.5 mg/l, BDL, BDL, BDL, 0.714 mg/l, 0.257 mg/l and 0.09 mg/l, respectively. The value of conductivity was observed as 17440 µs/cm

205

which is equivalent to 0.65x17440 mg/l of TDS i.e. 11336 mg/l of TDS. The values of all these parameters are within the limits prescribed except the value of Conductivity as 17440 µs/cm which is equal to 11336 mg/l of TDS, which is higher than the permissible limits of 2100mg/l.

1.3.4 Observations and recommendations:

The Executive Committee during its visit to the industry on 8/11/2019, it was observed that ETP of the industry consisting of reaction-cum-settling tank was in operation. The analysis results of the treated effluent sample were within the permissible limits except COD and conductivity parameters.

In view of the above, the Executive Committee makes the following recommendations :

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :
    i) To impose environment compensation amounting to Rs.5 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.
    ii) To revoke consent to operate granted to the industry under the provisions of Water Act, 1974.
    iii) To revoke authorisation granted under the provisions of the Hazardous Waste Management Rules, 2016
    iv) To issue directions to the industry that it shall operate its effluent treatment plant effectively and efficiently at all the times with required quantity of chemicals to meet with the standards prescribed by the CPCC.
    v) The sludge generated from the operation of effluent treatment plant shall be dried properly, packed in HDPE bags and shall dispose off the same on monthly basis to TSDF, Nimbuan.
    vi) The industry shall maintain proper record of water used in the processes of the industry, wastewater discharge and quantity of sludge generated during the operation of the effluent treatment plant.
    vii) The industry shall maintain proper record of chemicals used for treatment of effluent mentioning the total quantity of each chemical available before treatment, quantity of chemicals

206

used in the treatment of effluent and balance quantity of chemical after the completion of the treatment process.

viii) The industry shall submit water balance statement to CPCC and CPCC shall verify the said statement to ensure that the wastewater discharge may commensurate with the quantity of water used in the process.

1.4. M/s Jai Ambey Steel Industries, Plot no. 301, Industrial Area, Phase-II, Chandigarh

1.4.1. Background

As per record of CPCC, the industry is a small scale red category unit and is engaged in the manufacturing of steel furniture. The manufacturing processes involved are cutting of pipes, bending, polishing and nickle and chrome plating. The quantity of effluent generation from the industry is about 0.5 KLD. For the treatment of effluent of the industry, it has installed an effluent treatment plant based on physico chemical treatment. The industry has been granted consent under the provisions of the Water Act, 1974 vide no. CPCC/RSEP/2388/2015/1356/6405 dated 14/1/2016 valid upto 31/12/2019. It has also been granted authorization under the provisions of the Hazardous Waste management Rules, 2016 vide no. CPCC/RSEP/2388/2015/ 675/6405 dated 14/1/2016 valid upto 31/12/2019. The quantity of sludge, covered under category no. 34.3 and 12.8 of Schedule-I, has been mentioned as 50 Kg/year. For the disposal of the hazardous sludge, it has made an agreement with TSDF, Nimbuan i.e. M/s Ramky Enviro Engineers Ltd., Dera Bassi, Mohali.

1.4.2. Collection of effluent sample:

In order to assess the performance of the effluent treatment plant, the sample of treated effluent was collected and the same was sent to Haryana State Pollution Control Board (HSPCB) Laboratory for analysis. The analysis results, as received from HSPCB, are annexed as per **Annexure-3**.

The analysis results are mentioned as per Table-3 given below:

Table-3: Analysis results of the effluent samples

S.N.	Parameter	Value (in mg/l except pH and conductivity)	Permissible limit
1.	pH	7.36	6.0-9.0
2.	TSS	174	100
3.	COD	3198.4	250
4.	Oil & Grease	7.5	10
5.	Conductivity, µs/cm	34800	--
6.	T.Cr.	1.6	2.0
7.	Hexa Chromium	BDL	0.1
8.	Ni	24.7	3.0
9.	Iron	1.13	3.0
10.	Zinc	0.243	5
11.	Copper	0.30	2

1.4.3. Discussion on the analysis results:

The analysis results indicate that the value of TSS, oil and grease, T.Cr. Hexa Chromium, Nickle, Iron, Zinc and copper were observed as 174 mg/l, 7.5 mg/l, 1.6 mg/l, BDL, 24.7 mg/l, 1.13 mg/l, 0.243 mg/l and 0.30 mg/l, respectively. The values of parameters namely TSS: 174 mg/l, conductivity in terms of TDS as 22600 mg/l (0.65x34800) and nickle: 24.7 mg/l are higher than the permissible limits of 100 mg/l, 2100 mg/l, 3.0 mg/l, respectively. The value of COD parameter may not be considered in case of electroplating effluent because such effluent contains mostly inorganic constituents.

1.4.4 Observations and Recommendations:

The Executive Committee during its visit to the industry on 8/11/2019 observed that ETP consisting of reaction-cum-settling tank with small sludge drying bed was in operation. However, the parameters namely TSS (174 mg/l), conductivity i.e. TDS (22600 mg/l) and Nickle (24.7 mg/l) are higher than the permissible limits of 100 mg/l, 2100 mg/l and 3 mg/l, respectively. As such, the industry does not operate its effluent treatment plant effectively and efficiently.

In view of the above, the Executive Committee has made the following recommendations:

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :

208

i) To impose an environment compensation amounting to Rs.10 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.

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

iii) To revoke authorisation granted to the industry under the provisions of the Hazardous Waste Management Rules, 2016

iv) To issue directions under the provisions of the Water Act, 1974 for closure of the industry.

v) To issue directions to the industry that it shall operate its effluent treatment plant effectively and efficiently at all the times to meet with the standards prescribed by the CPCC and ETP shall be upgraded within 3 months..

vi) The sludge generated from the operation of effluent treatment plant shall be dried properly, packed in HDPE bags and dispose off the same to TSDF Nimbuan

vii) The industry shall maintain proper record of water used in the processes of the industry, wastewater discharge and quantity of sludge generated during the operation of the effluent treatment plant.

viii) The industry shall maintain proper record of chemicals used for treatment of effluent mentioning the total quantity of each chemical available before treatment, quantity of chemicals used in the treatment of effluent and balance quantity of chemical after the completion of the treatment process.

ix) The industry shall submit water balance statement to CPCC and CPCC shall verify the said statement to ensure that the wastewater discharge may commensurate with the quantity of water used in the processes.

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1.5. M/s Groz Beckert Asia Pvt. Ltd., Plot no. 177-A, Industrial Area, Phase-I, Chandigarh

1.5.1. Background

As per record of CPCC, the industry is a large scale red category unit. It is engaged in the manufacturing of sewing machine needles @ 150 million/year. The manufacturing processes of the industry are machining and electroplating (nickle & chrome plating). For the manufacturing of

209

sewing machine needles, it uses needle wire carbon steel as raw material and other chemicals. It discharges trade effluent about 128 KLD. For the treatment of effluent, it has installed effluent treatment plant (ETP) based on physico chemical treatment and the treated effluent is discharged into sewer.

For the treatment of domestic effluent, which is about 21 KLD, it has installed compacted sewage treatment plant consisting of primary settling tank, aeration system and clarifier. The industry has been granted consent under the provisions of the Water Act, 1974 vide no. CPCC/RLEP/0035/2019/54/1098 dated 10/6/2019 valid upto 31/5/2024. It has also been granted authorization under the provisions of the Hazardous Waste management Rules, 2016 vide no. CPCC/RLHE/0035/2019/38/1100 dated 10/6/2019 valid upto 31/5/2024.

The quantity of sludge has been covered under category no. 35.3 (9 ton/month), Category no. 5.1 (7 Kl/month), Category 5.1 (45 Kg/day), Category 33.3 (9 Kg/day), Category 12.1 (30 Ltr/month), Category 36.2 (475 Kg/year), Category 35.2 (475 Kg/year) of Schedule-I. For the disposal of the hazardous sludge, it has made an agreement with TSDF, Nimbuan i.e. M/s Ramky Enviro Engineers Ltd., Dera Bassi, Mohali.

1.5.2. Collection of effluent sample:

In order to assess the performance of the effluent treatment plant and sewage treatment plant, the samples of treated effluent and treated sewage were collected and the same were sent to Haryana State Pollution Control Board (HSPCB) Laboratory for analysis. The analysis results as received from HSPCB, are annexed as per **Annexure-4 and Annexure-5**. These analysis results are mentioned as per Table-4 and Table-5 given below :

Table-4: Analysis results of the effluent samples

S.N.	Parameter	Value (in mg/l except pH and conductivity)	Permissible limit
1.	pH	8.08	6.0-9.0
2.	TSS	15.0	100
3.	COD	61.2	250
4.	Oil & Grease	BDL	10
5.	Conductivity, µs/cm	2270	--
6.	T.Cr.	BDL	2.0

210

7.	Hexa Chromium	BDL	0.1
8.	Ni	BDL	3.0
9.	Iron	0.233	3.0
10.	Zinc	0.103	5
11.	Copper	BDL	2

1.5.3. Discussion on the analysis results:

The analysis results indicate that the value of TSS, Oil and grease, conductivity, T.Cr. Hexa Chromium, Nickle, Iron, Zinc and copper were observed as 15 mg/l, BDL, 2270 µs/cm, BDL, BDL, BDL, 0.233 mg/l, 0.103 mg/l and BDL, respectively. It indicates that all the parameters of the treated effluent are within the permissible limits.

1.5.4 Observations and recommendations:

The Executive Committee during its visit to the industry on 8/11/2019 observed that ETP consisting of physico chemical treatment followed by filteration system was in operation and the treated effluent is discharged into sewer. All the parameters in the treated effluent are within the limits prescribed. Therefore, the Executive Committee recommends that so far as ETP area is concerned, no action may be taken against the industry under the provisions of the Water Act, 1974.

Table-5 depicts the values of various parameters in the treated sewage sample collected by the Executive Committee on 8/11/2019 from the STP separately provided by the industry to treat the domestic effluent. The analysis results are mentioned as under:

Table-5: Analysis results of the effluent samples of STP

S.N.	Parameter	Value	Permissible limit
1.	pH	7.33	5.5-9.0
2.	TSS, mg/l	30	100
3.	BOD, mg/l	24	30
4.	COD, mg/l	96.8	250
5.	Oil & Grease, mg/l	2.0	10
6.	Conductivity, µs/cm	1603	--
7.	T.Coli, MPN/100 ml	3480000	1000
8.	F.Coli, MPN/100 ml	1720000	1000

211

1.5.5. Discussion on the analysis results:

The analysis results indicate that the value of TSS, BOD, COD, oil & grease, Conductivity, Total Coli, and F.Coli were observed as 30 mg/l, 24 mg/l, 96.8 mg/l, 2.0 mg/l, 1603 µs/cm, 3480000 MPN/100 ml and 1720000 MPN/100 ml, respectively. The values of TSS, BOD, COD, Oil & grease and conductivity in terms of TDS parameter are within the permissible limits. However, the values of T.Coli and F.Coli are much higher than the permissible limit of 1000 MPN/100 ml.

1.5.6 Observations and recommendations :

The Executive Committee during its visit to the industry on 8/11/2019 has observed that the values of total coliform and Fecal Coliform in the treated sewage have been found as 348000 MPN/100 ml and 172000 MPN/100 ml, which are much higher than the permissible value of 1000 MPN/100 ml because the system of reducing the bacterial contamination in the effluent was not in place.

In view of the analysis results of the effluent samples collected from the outlet of STP, the Executive Committee has made the following recommendations:

1. The Chairman, Chandigarh Pollution Control Committee shall initiate action under the provisions of the Water Act, 1974 as under :
    - i) To impose an environment compensation amounting to Rs. 20 lakh upon the industry. The said amount may be utilised for rejuvenation of the quality of River Ghaggar water.
    - ii) To revoke consent to operate granted to the industry under the provisions of Water Act, 1974.
    - iii) To issue directions to the industry that it shall make necessary arrangements to provide chlorination or any other disinfectant or UV system in place by 31/12/2019 to kill the Total Coliform and Fecal Coliform to the level that these may come down to the permissible value of 1000 MPN/100 ml.
    - iv) The treated sewage after conforming to all the parameters including F.Coli and T.Coli shall be utilized for gardening/parks/horticulture purposes.
    - v) The secondary sludge generated from the STP may be utilised as manure in the gardens and parks.

(Dr. V.K. Hatwal)	**(Dr. Babu Ram)**	**Justice Pritam Pal**
Member	**Member**	**Former Judge,**
		Punjab & Haryana High Court,
		Now as Chairman of the Executive Committee

212

Annexure-1

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1708
Dated: 21-11-2019

Description: Received a sample on 09/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Ashwani, AEE of HSPCB & Sh. Vivek Pandey, Sc-B (CPCC) alongwith Members of Executive Committee Constituted by Hon'ble NGT collected from M/s Ashoka Furniture Udyog, Plot No. 304, Phase-II, Ind. Area, Chandigarh on 08/11/2019. The sample has been analysed from 09/11/2019 to 21/11/2019.

1.	Sample Code	1952
2.	Sample Collected from #	Outlet of ETP

OBSERVATION

1.	Appearance	Yellow
2.	Odour	Bad

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	5.04		6.0-9.0	APHA, 4500-H+I
2.	Suspended Solid mg/l	250.0		100	APHA, 2540-D
3.	COD mg/l	63.2		250	APHA, 5220-B
4.	Oil & Grease mg/l	4.0		10	APHA, 5520-B
5.	Conductivity Micro S/cm	18730.0			-
6.	Total Chromium (as Cr) mg/l	725.1		2.0	-
7.	Hexavalent Chromium (as Cr+6) mg/l	520.0		0.1	-
8.	Nickel (as Ni) mg/l	177.4		3.0	-
9.	Iron (as Fe) mg/l	1.228		3.0	-
10.	Zinc (as Zn) mg/l	20.776			-
11.	Copper (as Cu) mg/l	0.41			-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjali | JSA2 Kiran Bala | Sc-B Sukhram | Analyst Harish Chandra | Laboratory Incharge Rajesh Garhia

CC to Member Secretary, CPCC, Chandigarh

The test report relate only to the particular sample submitted for testing

This information is provided by the field officer

BDL – Below Deduction Limit

DL – Deduction Limit

213

Annexure -2

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali

Report No. 1711
Dated: 21-11-2019

Description: Received a sample on 09/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Ashwani, AEE of HSPCB & Sh. Vivek Pandey, Sc-B (CPCC) alongwith Members of Executive Committee Constituted by Hon'ble NGT collected from M/s Atul Industries, Plot No. 59, Ind. Area, Phase-II, Chandigarh on 08/11/2019. The sample has been analysed from 09/11/2019 to 21/11/2019.

1	Sample Code	1955
2	Sample Collected from #	Outlet of ETP
		OBSERVATION
1.	Appearance	Pale Yellow
2.	Odour	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.85		6.0-9.0	APHA, 4500-H+I
2.	Suspended Solid mg/l	48.0		100	APHA, 2540-D
3.	COD mg/l	1667.2		250	APHA, 5220-B
4.	Oil & Grease mg/l	6.5		10	APHA, 5520-B
5.	Conductivity Micro S/cm	17440.0			-
6.	Total Chromium (as Cr) mg/l	BDL		2.0	-
7.	Hexavalent Chromium (as Cr+6) mg/l	BDL		0.1	-
8.	Nickel (as Ni) mg/l	BDL		3.0	-
9.	Iron (as Fe) mg/l	0.714		3.0	-
10.	Zinc (as Zn) mg/l	0.257			-
11.	Copper (as Cu) mg/l	0.09			-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjall | JSA2 Kiran Bala | Sc-B Sukhram | Analyst Harish Chandra | Laboratory Incharge Rajesh Garhia

CC to Member Secretary, CPCC, Chandigarh

The test report relate only to the particular sample submitted for testing.

This information is provided by the field officer.

BDL – Below Deduction Limit.

DL – Deductible Limit

214

Annexure-3

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1707
Dated: 21-11-2019

Description: Received a sample on 09/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Ashwani, AEE of HSPCB & Sh. Vivek Pandey, Sc-B (CPCC) alongwith Members of Executive Committee Constituted by Hon'ble NGT collected from M/s Jai Ambe Steel Industry, Plot No. 301, Ind. Area, Phase-II, Chandigarh on 08/11/2019. The sample has been analysed from 09/11/2019 to 21/11/2019.

1.	Sample Code	1951
2.	Sample Collected from #	Outlet of ETP
		OBSERVATION
1.	Appearance	Greyish
2.	Odour	Bad

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.36		6.0-9.0	APHA, 4500-H+I
2.	Suspended Solid mg/l	174.0		100	APHA, 2540-D
3.	COD mg/l	3198.4		250	APHA, 5220-B
4.	Oil & Grease mg/l	7.5		10	APHA, 5520-B
5.	Conductivity Micro S/cm	34800.0			-
6.	Total Chromium (as Cr) mg/l	1.6		2.0	-
7.	Hexavalent Chromium (as Cr+6) mg/l	BDL		0.1	-
8.	Nickel (as Ni) mg/l	24.7		3.0	-
9.	Iron (as Fe) mg/l	1.130		3.0	-
10.	Zinc (as Zn) mg/l	0.243			-
11.	Copper (as Cu) mg/l	0.30			-

Sample Collected/Not Collected by us	JSA1	JSA2	Sc-B	Analyst	Laboratory Incharge
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to Member Secretary, CPCC, Chandigarh

The test report relate only to the particular sample submitted for testing

This information is provided by the field officer. BDL – Below Deduction Limit DL – Deduction Limit.

Annexure-4

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana

Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1709
Dated: 21-11-2019

Description: Received a sample on 09/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Ashwani, AEE of HSPCB & Sh. Vivek Pandey, Sc-B (CPCC) alongwith Members of Executive Committee Constituted by Hon'ble NGT collected from M/s GROZ-BECKERT Asia (P) Ltd., Plot No. 177-A, Ind. Area, Phase-I, Chandigarh on 08/11/2019. The sample has been analysed from 09/11/2019 to 21/11/2019.

1	Sample Code	1953
2	Sample Collected from #	Outlet of ETP
		OBSERVATION
1	Appearance	Colourless
2	Odour	Odourless

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1	pH Value	8.08		6.0-9.0	APHA, 4500-H+I
2	Suspended Solid mg/l	15.0		100	APHA, 2540-D
3	COD mg/l	61.2		250	APHA, 5220-B
4	Oil & Grease mg/l	BDL (DL=2)		10	APHA, 5520-B
5	Conductivity Micro S/cm	2270.0			-
6	Total Chromium (as Cr) mg/l	BDL		2.0	-
7	Hexavalent Chromium (as Cr+6) mg/l	BDL		0.1	-
8	Nickel (as Ni) mg/l	BDL		3.0	-
9	Iron (as Fe) mg/l	0.233		3.0	-
10	Zinc (as Zn) mg/l	0.103			-
11	Copper (as Cu) mg/l	BDL			-

	JSA1	JSA2	Sc-B	Analyst	Laboratory Incharge
Sample Collected/Not Collected by us					
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to Member Secretary, CPCC, Chandigarh

The test report relate only to the particular sample submitted for testing

This information is provided by the field officer

BDL - Below Deduction Limit

DL - Deduction Limit

Annexure-5

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st& 2nd Floor, Sec-25, Panchkula, Haryana

Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1710
Dated: 21-11-2019

Description: Received a sample on 09/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Ashwani, AEE of HSPCB & Sh. Vivek Pandey, Sc-B (CPCC) alongwith Members of Executive Committee Constituted by Hon'ble NGT collected from M/s GROZ-BECKERT Asia (P) Ltd., Plot No. 177-A, Ind. Area, Phase-I, Chandigarh on 08/11/2019. The sample has been analysed from 09/11/2019 to 21/11/2019.

1.	Sample Code	1954
2.	Sample Collected from #	Outlet of STP

OBSERVATION

1.	Appearance	Hazy
2.	Odour	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.33		5.5-9.0	APHA, 4500-H
2.	Suspended Solid mg/l	30.0		100	APHA, 2540-D
3.	BOD mg/l	24.0		30	IS:3025(P-44)
4.	COD mg/l	96.8		250	APHA, 5220-B
5.	Oil & Grease mg/l	2.0		10	APHA, 5520-B
6.	Conductivity Micro S/cm	1603.0			-
7.	Total Coliform MPN/100 ml	3480000.0			-
8.	Fecal Coliform MPN/100 ml	1720000.0			-

	JSA1	JSA2	Sc-B	Analyst	Laboratory Incharge
Sample Collected/Not Collected by us					
Sample Consumed in testing	Manjali	Kiran Bala	Sukhram	Harish Chandra	Rajesh Garhia

CC to Member Secretary, CPCC, Chandigarh

The test report relate only to the particular sample submitted for testing

This information is provided by the field officer.

BDL – Below Deduction Limit

DL – Deduction Limit

217

Annexure-6

OFFICE OF THE EXECUTIVE COMMITTEE

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

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

To

1. The Chairman,
   Haryana State Pollution Control Board,
   Panchkula.

2. The Chairman,
   Punjab Pollution Control Board,
   Patiala.

No. CEC/2019/567 - 568
Dated: 5.12.2019

Subject: Report on visit to the industries of Panchkula Area (Haryana) and Dera Bassi area (Punjab) on 19.11.2019 by the Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Stench Grips Mansa's Ghaggar River and Yogendera Kumar.

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It is intimated that the Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 and 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto case) and Yogender Kumar has visited the industries of Panchkula Area (Haryana) and Dera Bassi area (Punjab) on 19.11.2019. The report prepared by the Executive Committee is enclosed herewith.

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

DA/ As above

(Dr. Babu Ram)
Technical Expert,
Executive Committee

Endst. No. CEC/2019/ 569 Dated: 5/12/19

A copy of the above alongwith copy of the report is forwarded to the Additional Chief Secretary to Government of Haryana, Department of Environment and Climate change Research, Haryana Civil Secretariat, Chandigarh for information and necessary action please.

DA/ As above

(Dr. Babu Ram)
Technical Expert,
Executive Committee

Endst. No. CEC/2019/ 570 Dated: 5/12/19

A copy of the above alongwith copy of the report is forwarded to the Principal Secretary to Government of Punjab, Department of Science, Technology and Environment for information and necessary action please.

DA/ As above

(Dr. Babu Ram)
Technical Expert,
Executive Committee

Report on visit to the industries of Panchkula Area (Haryana) and Dera Bassi area (Punjab) on 19.11.2019 by the Executive Committee constituted by the Hon'ble National Green Tribunal in OA No. 138 / 139 of 2016 in the matter of Stench Grips Mansa's Ghaggar River and Yogendera Kumar.

The following were present during the visit:-

a) Members of the Monitoring Committee

S No.	Name & Designation	Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court, Chandigarh.	Chairman
2.	Ms. Urvashi Gulati, IAS, Former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, Former Member Secretary, PPCB	Member

b) Officers of Haryana Pollution Control Board

1. Er. Sidharth Bhargava, Assistant Environmental Engineer

c) Officers of Punjab Pollution Control Board

1. Er. Surinderjit Singh, Assistant Environmental Engineer
2. Sh. Janak Raj, Assistant Scientific Officer
3. Er. Ashok Kumar Sharma, Environmental Engineer (only for Dera Bassi area)

1.0 Visit to the industries

The Executive Committee visited the industries of Panchkula and Dera Bassi area, which fall in the catchment area of river Ghaggar, on 19.11.2019. The following industries were visited by the Committee:

1.1 M/s VMS Metal Works Pvt. Ltd, Plot No. 278-279, Industrial Area, Phase-I, Panchkula:-

1.1.1 Background

As per record of HSPCB, M/s VMS Metal Works Pvt. Ltd., Plot No. 278-279, Industrial Area, Phase-I, Panchkula was commissioned in the year 2013 and is engaged in the manufacturing of handles of the faucets. The production capacity of the unit is 1400 numbers per day. The manufacturing processes involved are: Zinc casting, grinding, buffing and zinc electroplating. It has been granted Consent to Operate under the provision of Water (Prevention and Control of Pollution) Act, 1974 for the discharge of treated effluent about 3.5 KLD and Air (Prevention and Control of Pollution) Act, 1981, which are valid upto 30.09.2020. The unit has been granted authorization under the provisions of the Hazardous Waste Management Rules, 2016, which is valid upto 30.09.2020.

1.1.2 Visit to the Industry and collection of effluent sample on 19.11.2019

The Executive Committee, visited the industry on 19.11.2019 and it was observed that the industry discharges its effluent from electroplating section. For the treatment

219

of effluent of industry, it has installed an effluent treatment plant consisting of collection tank, reaction cum settling tank, collection tank, primary settling tank, secondary settling tank, activated carbon filter and pressure sand filter. However, the industry started filling the effluent into reaction-cum-settling tank of ETP after the arrival of the monitoring committee but the motor could not lift the effluent to pump it to the reaction tank. Therefore, the effluent sample from the collection tank, containing untreated effluent, was collected and sent to PPCB laboratory, Patiala for analysis. The analysis results, as received from PPCB lab, Patiala, are annexed herewith as per **Annexure-1**. These analysis results are mentioned in **Table-1**, given below:

Table-1: Analysis results of the effluent samples

Sr. No.	Parameters	At the inlet of ETP
1.	pH	3.3
2.	TSS, mg/l	45
3.	Iron, mg/l	9.31
4.	Copper, mg/l	0.77
5.	Zinc, mg/l	1.69
6.	Nickle, mg/l	9.75
7.	Cyanide, mg/l	BDL
8.	Hexa Chrome, mg/l	2.0
9.	Total Chrome, mg/l	7.08
10.	Ammonical Nitrogen, mg/l	BDL
11.	Total Metal, mg/l	28.6
12.	Oil & Grease, mg/l	6.4

1.1.3 Discussion on the analysis results

The analysis results of the untreated effluent sample, collected by the Executive Committee, indicate that the values of pH, TSS, Iron, Copper, Zinc, Nickle, Cyanide, Hexa Chrome, Total Chrome, Ammonical Nitrogen, Total Metal & Oil & Grease were found to be 3.3, 45 mg/l, 9.31 mg/l, 0.77 mg/l, 1.69 mg/l, 9.75 mg/l, BDL, 2.0 mg/l, 7.08 mg/l, BDL, 28.6 mg/l & 6.4 mg/l, respectively. The values of pH (3.3) is lower than the permissible value of 5.5-9.0. The values of iron (9.31 mg/l), Nickle (9.75 mg/l), Hexa Chrome (2.0 mg/l), Total Chrome (7.08 mg/l) and Total Metal (28.6 mg/l) are higher than the permissible limits of 3.0 mg/l, 3.0 mg/l, 0.1 mg/l, 2.0 mg/l and 10 mg/l, respectively, prescribed by MoEF&CC/HPSCB.

1.1.4 Observations and Recommendations of the Executive Committee

The representative of the industry tried to fill the untreated effluent into reaction-cum-settling tank to impart it chemical treatment but the pump installed for lifting the effluent, could not lift the effluent to the said tank. Therefore, ETP could not be made operational. Thus, the Executive Committee collected the effluent from the collection tank, where, the untreated wastewater was collected. The analysis results of various parameters have been discussed in para 1.1.3 above and the values of iron (9.31 mg/l), Nickle (9.75 mg/l), Hexa Chrome (2.0 mg/l), Total Chrome (7.08

mg/l) and Total Metal (28.6 mg/l) are higher than the permissible limits of 3.0 mg/l, 3.0 mg/l, 0.1 mg/l, 2.0 mg/l and 10 mg/l, respectively, prescribed by MoEF&CC/HPSCB.

In view of the above, the Executive Committee has made the following recommendations:

1. Chairman, HSPCB, shall initiate action to issue following directions to the industry under the provisions of Water Act, 1974:
   i. To impose an Environment Compensation amounting to Rs. 15 lakhs upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.
   ii. To issue directions for closure of the industry.
   iii. To revoke consent to operate under the provisions of Water Act, 1974.
   iv. Regarding operation of ETP, the industry shall make arrangements in such a way that all the components of ETP should be made operational at all the times. For drying of sludge, to be generated from the operation of physico chemical treatment system, filter press of suitable capacity may be installed and for its further drying, it shall provide sludge drying beds of adequate capacity and ensure that no wet sludge / semi solid sludge is packed in HDPE bags. The stored sludge may be disposed off to TSDF within the time schedule.
   v. The industry shall provide flow meter at the inlet and outlet of effluent treatment plant and proper record of effluent treated per day and quantity of hazardous sludge generated per day.

1.2 M/s Rehmat Electrotech Engineer, Plot No. 156, Industrial Area, Phase-I, Panchkula:

1.2.1 Background

As per record of HSPCB, M/s Rehmat Electrotech Engineer Plot No. 156, Industrial Area, Phase-I, Panchkula was commissioned in the year 2013 and is involved in the process of zinc electroplating of tractor parts with production capacity of 1,000 Kg/day. The industry has been granted Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 for the discharge of treated effluent about 0.4 KLD and Air (Prevention and Control of Pollution) Act, 1981, which are valid upto 30.09.2020. The unit has also been granted the authorization under the Hazardous Waste Management Rules, 2016,which is valid upto 30.09.2020. The unit was closed by Haryana State Pollution Control Board vide no. 1527 dated 05.07.2019.

1.2.2 Visit to the Industry by the Executive Committee

The industry was visited by the Executive Committee in the presence of Er. Sidharth Bhargava, Assistant Environmental Engineer, HSPCB on 19.11.2019 and it was

221

observed that the industry was not in operation. On enquiry, Er. Sidharth Bhargava, Assistant Environmental Engineer, HSPCB informed that the industry has been sealed by HSPCB and the directions for disconnection of electric connection have been issued to the Haryana Vidyut Prasaran Nigam Limited (HVPNL) and now the electric connection of the industry stands disconnected.

Therefore, the Executive Committee could not collect the effluent sample of the industry.

1.3 M/s Dynamic Enterprises, Plot No. 186, Industrial Area Phase-I, Panchkula:

1.3.1 Background

As per record of HSPCB, M/s Dynamic Enterprises Plot No. 186, Industrial Area, Phase-I, Panchkula was commissioned in the year 2015 and is engaged in the processes of electroplating of M.S Screws and nuts. The production capacity of the industry is 1 TPD. It has been granted Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 for the discharge of treated effluent about 1 KLD and Air (Prevention and Control of Pollution) Act, 1981, which are valid upto 30.09.2020. The industry has also been granted the authorization under Hazardous Waste Management Rules, 2016, which is valid upto 30.09.2020.

1.3.2 Visit to the industry and collection of effluent sample on 19.11.2019

The Executive Committee, visited the industry on 19.11.2019 and it was observed that the industry discharges its effluent from electroplating section. For the treatment of effluent of industry, it has installed an effluent treatment plant consisting of collection tank, reaction cum settling tank, sludge drying bed, activated carbon filter and pressure sand filter. During the visit, Effluent Treatment Plant of the industry was not in operation. The representative of the industry filled the reaction-cum-settling tank with untreated effluent but the chemical dozing system, to impart chemical treatment to the effluent, could not be made operational, as such, the Executive Committee collected the untreated effluent sample. The effluent sample was sent to PPCB laboratory, Patiala for analysis of various parameters. The analysis results, as received from PPCB, Laboratory, are annexed as per **Annexure-2** and these analysis results are mentioned as per **Table-2** given below:

Table -2 : Analysis results of the effluent samples

Sr. No.	Parameters	At the inlet of ETP
1.	pH	0.60
2.	TSS, mg/l	560
3.	Oil & Grease, mg/l	8.4
4.	Ammonical Nitrogen, mg/l	BDL
5.	Zinc, mg/l	8760
6.	Iron, mg/l	6430
7.	Hexa Chrome, mg/l	2218

222

8.	Total Chrome, mg/l	2510
9.	Total Metal, mg/l	17700

1.3.3 Discussion on the analysis results and Observations of the Committee

At the time of visit of the Executive Committee, the effluent treatment system of the industry could not be made operational by the representative of the industry. Though the effluent from the collection tank was got lifted and filled in the reaction-cum-settling tank, but the chemical dozing system could not be made operational, as such, chemical dozing could not be imparted to the effluent for its treatment. Therefore, the Executive Committee collected the untreated effluent and was sent to PPCB lab, Patiala for analysis. As per analysis results (**Table-2**) the values of parameters were observed as TSS : 560 mg/l, Oil & Grease : 8.4 mg/l, Ammonical Nitrogen : BDL, Zinc : 8760 mg/l, Iron : 6430 mg/l, Hexa Chrome : 2218 mg/l, Total Chrome : 2510 mg/l and Total Metal : 17700 mg/l.

The value of pH (0.60), TSS (560 mg/l), Zinc (8760 mg/l), Iron (6430 mg/l), Hexa Chrome (2218 mg/l), Total Chrome (2510 mg/l) and Total Metal (17700 mg/l) were found much higher than the permissible limits of TSS, Zinc, Iron, Hexa Chrome, Total Chrome and Total Metal as 100 mg/l, 5 mg/l, 3 mg/l, 0.1 mg/l, 2.0 mg/l and 10 mg/l, respectively and the value of pH was very low as compared to the permissible value of 6.0 to 9.0. These analysis results indicate that the industry was discharging concentrated effluent without any treatment to the sewerage system.

1.3.4 Recommendations of the Executive Committee

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

1. Chairman, HSPCB, shall initiate action to issue following directions to the industry under the provisions of Water Act, 1974:
   i. To impose an Environment Compensation amounting to Rs. 20 lakh upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.
   ii. To issue directions for closure of the industry.
   iii. To revoke the consent to operate under the provisions of Water Act, 1974.
   iv. Regarding operation of ETP, the industry shall make arrangements in such a way that all the components of ETP should be made operational at all the times. For drying of sludge, to be generated from the operation of physico chemical treatment system, filter press of adequate capacity may be installed and for its further drying, it shall provide sludge drying beds of adequate capacity and ensure that no wet sludge / semi solid sludge is

223

packed in HDPE bags. The stored sludge may be disposed off to TSDF within the time schedule.

v. The industry shall provide flow meters at the inlet and outlet of effluent treatment plant and proper record of effluent treated per day and quantity of hazardous waste generated per day.

1.4 M/s Horometrical Devices India Pvt Limited, Plot No. 25, Industrial Area, Phase-II, Panchkula:-

1.4.1 Background

As per record of HSPCB, M/s Horometrical Devices India Pvt Ltd., Plot No. 25, Industrial Area, Phase-II, Panchkula was commissioned in the year 2015 and engaged in the process of electroplating of watch dials. The production capacity of the unit is 20,000 dials per day. It has been granted Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 for the discharge of treated effluent about 0.3 KLD and Air (Prevention and Control of Pollution) Act, 1981, which are valid upto 30.09.2020. It has also been granted the authorization under the Hazardous Waste Management Rules, 2016, which is valid upto 30.09.2020. The industry has made agreement with HWTSDF-Gujrat Enviro Protection and Infrastructure (Haryana) Pvt. Ltd. at Pali, Faridabad for disposal of ETP Sludge.

1.4.2 Visit to the Industry on 19.11.2019

The Executive Committee, visited the industry on 19.11.2019 and it was observed that the industry discharges its effluent about 5 KLD from electroplating section. For the treatment of effluent of industry, it has installed an effluent treatment plant consisting of collection tank, reaction tank, tube settler-I, tube settler-II, activated carbon filter and pressure sand filter.

1.4.3 Collection of effluent samples

At the time of visit, effluent treatment plant of the industry was not in operation and it could not be made operational because the pump could not lift the effluent. Therefore, untreated effluent sample from collection tank was collected and the same was sent for analysis of the various parameters to PPCB laboratory at Patiala. The analysis results, as received from PPCB lab, are annexed as per **Annexure-3**. These analysis results have been mentioned in **Table-3** given below.

Table-3: Analysis results of the effluent samples

Sr. No.	Parameters	At the inlet of ETP
1.	pH	7.6
2.	TSS, mg/l	22
3.	Nickle, mg/l	91.2
4.	Ammonical Nitrogen, mg/l	2.2
5.	Silver mg/l	3.9

224

6.	Total Metal, mg/l	95.1
7.	Oil & Grease, mg/l	5.8

1.4.4 Discussion on the analysis results

As mentioned above, the ETP of the industry could not be made operational because the effluent lifting pump could not be made operational, as such, the Executive Committee collected the untreated effluent, lying stored in the collection tank and sent to PPCB Laboratory, Patiala for analysis of various parameters. As per analysis results (Table-3), the values of Nickle (91.2 mg/l), and Total Metal (95.1 mg/l) are higher than the permissible limits of 3 mg/l, and 10 mg/l, respectively.

1.4.5 Observations and Recommendations of the Executive Committee

The representative of the industry tried to fill the untreated effluent into reaction tank to impart it chemical dozing but the pump installed for lifting the effluent, could not be made operational, as such, the Executive Committee collected the untreated effluent sample from the collection tank. The analysis results of various parameters have been discussed above in para 1.4.4. The values of Nickle (91.2 mg/l), and Total Metal (95.1 mg/l) are higher than the permissible limits of 3 mg/l, and 10 mg/l, respectively.

In view of the above, the Executive Committee has made the following recommendations:

1. Chairman, HSPCB, shall initiate action to issue following directions to the industry under the provisions of Water Act, 1974:
   i. To impose an Environment Compensation amounting to Rs. 20 lakhs upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.
   ii. The industry shall make arrangements in such a way that all the components of ETP should be made operational at all the times. For drying of sludge, to be generated from the operation of physico chemical treatment system, filter press of adequate capacity may be installed and for further drying of the sludge, it shall provide sludge drying beds of adequate capacity and ensure that no wet sludge / sludge in slurry form is packed in HDPE bags. The stored sludge may be sent to TSDF within the time schedule.
   iii. The industry shall provide flow meters at the inlet and outlet of effluent treatment plant and maintain proper record of effluent treated per day and the quantity of hazardous sludge generated per day.

1.5 M/s Torque Pharmaceuticals, Village Issapur, P.O. Dappar, Tehsil Dera Bassi, Distt. SAS Nagar

1.5.1 Background

M/s Torque Pharmaceuticals, Village Issapur, P.O. Dappar, Tehsil Dera Bassi, Distt. SAS Nagar was commissioned in the year 1994 and is engaged in the business of manufacturing of Capsules @ 2,25,000 nos./day, dry syrups @ 7500 nos,/day, syrups (10 ml & 25 ml) @ 1,00000 nos./day, injections 1 ml @ 20000 nos./day, eye drops @ 25000 no./day, ointments @ 20000 nos./day, tablets @ 600000 nos./day, injections (5ml to 30ml) @ 2000 nos./day.

The industry discharges its trade effluent about 4 KLD from formulation process. For the treatment of effluent, it has installed an ETP based on physio-chemical followed by aerobic biological treatment. The components of ETP are collection tank, flash mixer, tube settler, aeration tanks and tube settlers. It has also provided pre filtration tank, sand filter, carbon filter and sludge drying beds but these components are common for ETP and STP.

For the treatment of domestic effluent about 4 KLD, it has installed separate STP based aerobic biological treatment system followed by common pre-filtration tank, sand filter and carbon filters installed for ETP.

As per record of PPCB, the mode of disposal of the treated trade effluent and treated sewage of the industry is onto land of plantation. The industry has provided 2000 sq. yards area for plantation, where the treated effluent and treated sewage is discharged. The analysis results of the treated effluent sample lastly collected by PPCB on 11.8.2018 indicate that the values of all the parameters are well within the limits. (pH — 7.53, TSS = 14, TDS = 484, BOD=28, COD=134, O&G=8 mg/l). The industry has provided electronic flow meter at the outlet of the ETP. The industry has been granted consents, under the provision of the Water Act, 1974 and Air Act, 1981, which are valid upto 30.9.2023.

1.5.2 Visit to the Industry on 19.11.2019

The Executive Committee, visited the industry on 19.11.2019 and it was observed that the industry discharges trade effluent about 4 KLD from pharmaceutical process and domestic effluent 4 KLD. For the treatment of trade effluent of industry, it has installed an effluent treatment plant consisting of collection tank, reaction cum settling tank (with dose of alum and polyelectrolyte), aeration tank and settling tank. For the treatment of domestic effluent about 4 KLD, it has installed separate STP based on aerobic biological treatment system followed by common pre-filtration tank, sand filter and carbon filter for ETP and STP.

1.5.2.2 Observations of the Executive Committee

During visit, the following observations were made:

i) The industry has installed separate ETP and STP for the treatment of effluent and sewage of the industry. However, it has common pre-filtration tank, sand filter and activated carbon filter for both ETP and STP.

ii) At the time of visit, some components ETP and STP were in operation but there was no effluent in the common pre-filtration tank, thereby sand filter and activated carbon filter were not in operation. The effluent from secondary tube settler was being discharged onto land for plantation. The reasons for not operating sand filter and carbon filter may be due to their chocking and the filter media placed in these tanks may require replacement.

iii) The sludge drying beds, provided on one corner of ETP, were found filled with wastewater and there was no sludge in these beds. These facts indicate that the secondary tube settler of effluent treatment plant does not work properly. Therefore, the tubes of secondary clarifier either requires replacement or it requires upgradation.

1.5.3 Collection of effluent samples

During the visit to the industry, the Executive Committee collected the effluent sample from following points:

i) Inlet to ETP

ii) Outlet of secondary tube settler

The effluent samples collected from these points were sent to PPCB, Laboratory for analysis. The analysis results, as received from PPCB, Laboratory at Patiala, are annexed as per **Annexure-4**. These analysis results have been mentioned in **Table-4** give below:

Table-4: Analysis results of the effluent samples

Sr. No.	Parameters	Inlet of ETP	Outlet of Secondary Tube Settler
1.	pH	3.8	6.2
2.	COD mg/l	1237	512
3.	BOD mg/l	368	128
4.	TSS mg/l	212	139
5.	TDS mg/l	514	1040
6.	Oil & Grease mg/l	BDL	BDL
7.	Sulphide mg/l	10.2	BDL
8.	Phenols mg/l	BDL	BDL
9.	Phosphate mg/l	4.2	BDL
10.	Cyanide mg/l	BDL	BDL

11.	Bio-assay	--	0% survival of fish after 96 hrs. in 100% effluent
12.	Hg mg/l	BDL	BDL
13.	As mg/l	BDL	BDL
14.	Pb mg/l	0.4	0.2
15.	Hexa Chrome mg/l	4.6	BDL
16.	Total Chrome mg/l	5.5	0.4

1.5.4 Discussion on the analysis results

The analysis results of the effluent samples collected from inlet to ETP indicate the values of parameters pH : 3.8, COD : 1237 mg/l, BOD : 368 mg/l, TSS : 212 mg/l, TDS : 514 mg/l, Oil & Grease : BDL, Sulphide : 10.2 mg/l, Phenolic Compound : BDL, Phasphate : 4.2 mg/l, Cyanide : BDL, Mercury : BDL, Arsenic : BDL, Lead : 0.4 mg/l, Hexa Chrome : 4.6 mg/l and Total Chrome: 5.5 mg/l.

In the effluent samples collected from the outlet of secondary tube settler, the values of parameters were observed as pH : 6.2, COD : 512 mg/l, BOD : 128 mg/l, TSS : 139 mg/l, TDS : 1040 mg/l, Oil & Grease : BDL, Sulphide : BDL, Phenolic Compounds : BDL, Phosphate : BDL, Cyanide : BDL, Bio-assay : 0% survival of fish after 96 hrs. in 100% effluent, Mercury : BDL, Arsenic : BDL, Lead : 0.2 mg/l and Hexa Chrome : BDL and Total Chrome: 0.4 mg/l.

The analysis results indicate that the values of COD (512 mg/l), BOD (128 mg/l), TSS (139 mg/l) were found higher than the permissible limits of COD : 250 mg/, BOD : 30 mg/l and TSS : 100 mg/l, respectively.

1.5.5 Recommendations of the Committee

In view of the analysis results of effluent samples, discussion on the analysis results and observations of the Executive Committee, the following recommendations are made:

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

i. To impose an Environment Compensation amounting to Rs. 40 lakhs upon the industry. The said amount shall be utilized for rejuvenation of the quality of River Ghaggar water.
ii. To revoke the consent to operate, if granted to the industry, under the provisions of the Water Act, 1974.
iii. To issue directions for closure of the industry.

iv. The industry shall upgrade its effluent treatment plant within 3 months so that the industry may meet with all the standards prescribed for such type of industries.

v. The production capacity of the industry shall be reduced by 20%.

With regard to environment compensation to be imposed on the polluter, the Hon'ble NGT in para no. 16 of its order dated 16.7.2019 in OA no. 916 of 2018 in the matter of Sobha Singh and Others V/s State of Punjab has ordered as under:

> *"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."*

Dr. Babu Ram

Ms. Urvashi Gulati,

Justice Pritam Pal,
Former Judge, Punjab and Haryana High Court,
Now as Chairman of the Executive Committee

229

Annexure-7

OFFICE OF THE EXECUTIVE COMMITTEE

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

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

To

The Chairman,
Himachal Pradesh Pollution Control Board,
Shimla

No. CEC/2019/ 612
Dated: 18.12.2019

Subject: **Report on the visit to the industries of Parwanoo area (H.P.) on 25.11.2019 by the Executive Committee constituted by the Hon'ble NGT in OA No 138 & 139 of 2016 in the matter "Stench Grips Mansa's Sacred Ghaggar River (Suo Moto Case)".**

Please find enclosed herewith a report on the visit to the industries of Parwanoo area (H.P.) on 25.11.2019 by the Executive Committee constituted by the Hon'ble NGT in OA No 138 & 139 of 2016 in the matter "Stench Grips Mansa's Sacred Ghaggar River (Suo Moto Case)" for your kind information and necessary action.

It is requested that the necessary action on the recommendations of the Executive Committee made in the case of each industry may be taken as per the provisions of the Water Act, 1974 and action taken report be submitted within 21 days.

DA/as above

18/12/2019

(Dr. Babu Ram)
Technical Expert,
Executive Committee

Endst No. CEC/2019/ 613 Dated: 18.12.2019

A copy of the above is forwarded to the Additional Chief Secretary to Government of Himachal Pradesh, Department of Environment, Science and Technology, Shimla for information and necessary action please.

DA/as above

18/12/2019

(Dr. Babu Ram)
Technical Expert,
Executive Committee

230

Report on the visit to the industries of Parwanoo area (H.P.) on 25.11.2019 by the Executive Committee constituted by the Hon'ble NGT in OA No 138 & 139 of 2016 in the matter "Stench Grips Mansa's Sacred Ghaggar River (Suo Moto Case)"

The Members of the Executive Committee, officers of the Haryana State Pollution Control Board and Himachal Pradesh State Pollution Control Board (list of the Officers is annexed as per **Annexure-1**) visited the industries of Parwanoo area on 25.11.2019 and the status is mentioned as under:

1.0 Federal Mogul Bearings India Pvt. Ltd. Plot No. 5, Sector-02, Industrial Area, Parwanoo

1.1 Background

As per record of HPPCB, the industry namely Federal Mogul Bearings India Pvt. Ltd, Plot No. 5, Sector-02, Industrial Area, Parwanoo was commissioned in the year 1979 and is engaged in the manufacturing of bearings, washers, bushes and flanges. It is a large sale unit and has been granted consent under the provisions of Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 which are valid upto 31.03.2021. It has also been granted authorization under the Hazardous Waste Management Rules, 2016, which is valid upto 31.03.2023.

The manufacturing processes of the industry are sintering on metal strips, blanking, boring and tin plating. The wastewater is generated from water rinsing of the tin plated finished products and the same is treated in the ETP of capacity 150 KLD. The unit has its manpower about 260 persons and the domestic wastewater generated from the same is treated in the STP of 20 KLD Capacity. The entire treated wastewater from the ETP and STP is utilized for gardening and toilet flushing within the premises of the industry. The details of the hazardous wastes generated by the industry and its mode of disposal are mentioned as per Table given below:

Table

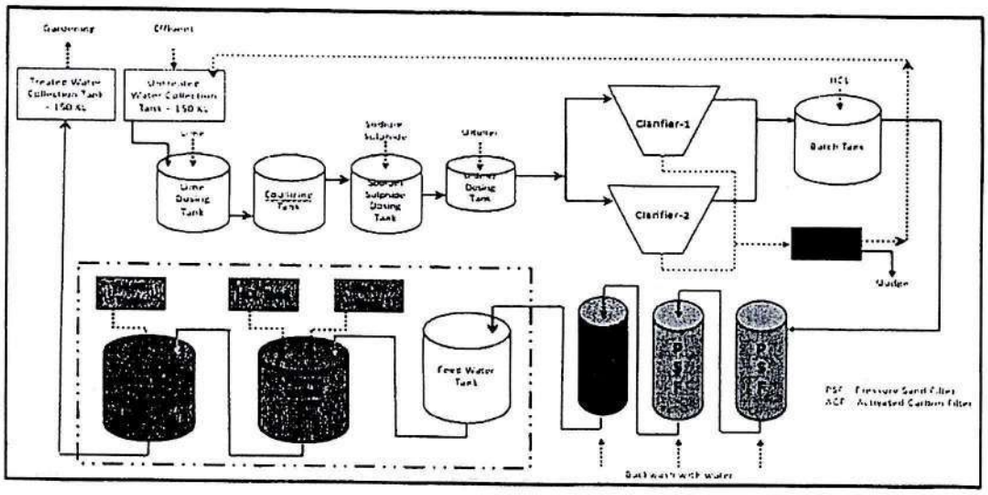
S N	Categories of Hazardous Waste	Type of Hazardous Waste	Quantity of Hazardous Waste	Mode of Disposal of hazardous wastes
1	33.2	Contaminated cotton rags or other cleaning materials	40 T/Annum	Incinerable / TSDF
2	7.4	Non-ferrous metal bearing sludge and residue.	2 T/Annum	Land fillable / TSDF
3	9.1	Lead bearing residues	10 T/Annum	Land fillable / TSDF
4	35.3	Chemical sludge from waste water treatment	15 T/Annum	Land fillable / TSDF
5	20.2	Spent solvents	1 KL/Annum	TSDF

6	35.2	Spent ion exchange resin containing toxic metals	10 T/Annum	Landfillable / TSDF
7	5.1	Used or spent oil	10 KL/Annum	Recyclable/ TSDF
8	36.2	Spent carbon or filter medium	4 T/Annum	Landfillable / TSDF
9	33.1	Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	1500 Nos./Year	Recyclable/ TSDF

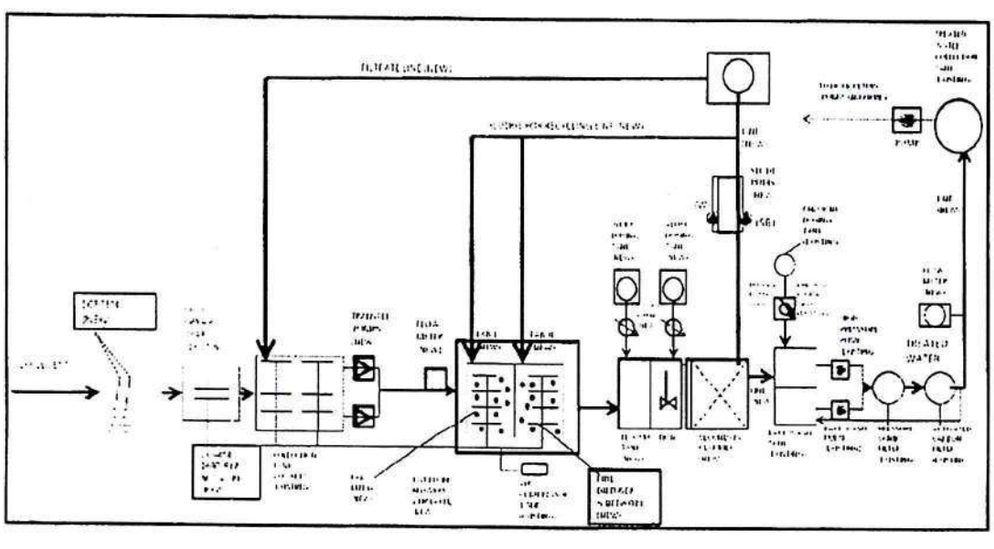
1.2 Visit to the industry

During visit to the industry, it was observed that the industry generates effluent from its electroplating process and the quantity of the same is about 150 m^3/day. For the treatment of effluent of the industry, it has installed Effluent Treatment Plant (ETP) consisting of physio-chemical treatment followed activated carbon filter, pressure sand filter and flouride & heavy metal removal through ion exchange system. The treatment of domestic wastewater is done separately in STP of capacity 20 KLD. The process flow diagrams of ETP and STP as submitted by the industry are mentioned as under:

ETP FLOW DIAGRAM



STP FLOW DIAGRAM



232

1.2.1 Collection of effluent samples

The Executive Committee collected the effluent samples from the final outlet of effluent treatment plant, the analysis results of which are mentioned as per **Table-1** given below:

Table-1: Analysis results of effluent samples

S.no.	Parameters	Values in mg/l expect pH and conductivity	Permissible limits in mg/l expect pH and conductivity
1.	pH	6.56	6.0-9.0
2.	Suspended solids	17.0	100
3.	COD	139.2	250
4.	Oil & Grease	BDL	10
5.	Conductivity, µS/cm	2610	-
6.	TDS	1702	-
7.	Chloride	784	-
8.	Iron	0.124	3.0
9.	Zinc	0.112	-
10.	Copper	0.04	3.0
11.	Lead	1.304	0.1

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

1.2.1.1 Discussion on the analysis results and observations of the Executive Committee

The analysis results of the effluent samples, as mentioned in Table-1, indicate that the values of pH, TSS, COD, Oil and Grease, conductivity, TDS, Chlorine, Iron, Zinc, Copper, and Lead in the treated effluent were observed to be 6.56, 17 mg/l, 139.2 mg/l, BDL, 2610 µS/cm, 1702 mg/l 784 mg/l, 0.124 mg/l, 0.112 mg/l, 0.04 mg/l and 1.304 mg/l, respectively. The values of these parameters are within the limits prescribed by MoEF/HPPCB.

1.3 Recommendations

In view of the analysis results of the treated effluent sample and components of effluent treatment plant installed by the industry to treat the electroplating effluent, the Executive Committee observed that the industry is meeting with the prescribed norms and is operating with the valid consents of the Board under the provisions of the Water Act, 1974, Air Act, 1981 and valid authorization under the provisions of Hazardous Waste Management Rules, 2016. Thus, the industry is a compliant unit w.r.t environment laws. However, there is small observation of the Executive Committee that the industry should construct small boundary all around the filter press with proper slope towards the drainage system so as to avoid the spreading of

filtrate of filter press in the premises of the industry. Chairman, HPPCB shall convey the said observation may be conveyed to the industry with the direction to comply in the same within 15 days and submit action taken report within one month.

2.0 Gabriel India Pvt Ltd. Plot No. 05, Sector-02, Industrial Area Parwanoo

2.1 Background

M/s Gabriel India Pvt Ltd. Plot No. 05, Sector-02, Industrial Area, Parwanoo is engaged in the manufacturing of shock absorbers and front forks. The manufacturing processes of the industry are cleaning, welding, assembly, phosphating, painting, packing & final dispatch. It is a large scale unit and has been granted consent under the provisions of Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 and these are valid upto 31.03.2021. The authorization under the provisions of the Hazardous Waste Management Rules, 2016 has also been granted and the same is valid up to 31.3.2022.

The details of the hazardous waste generated by the industry and their mode of disposal are mentioned as per Table given below

Table

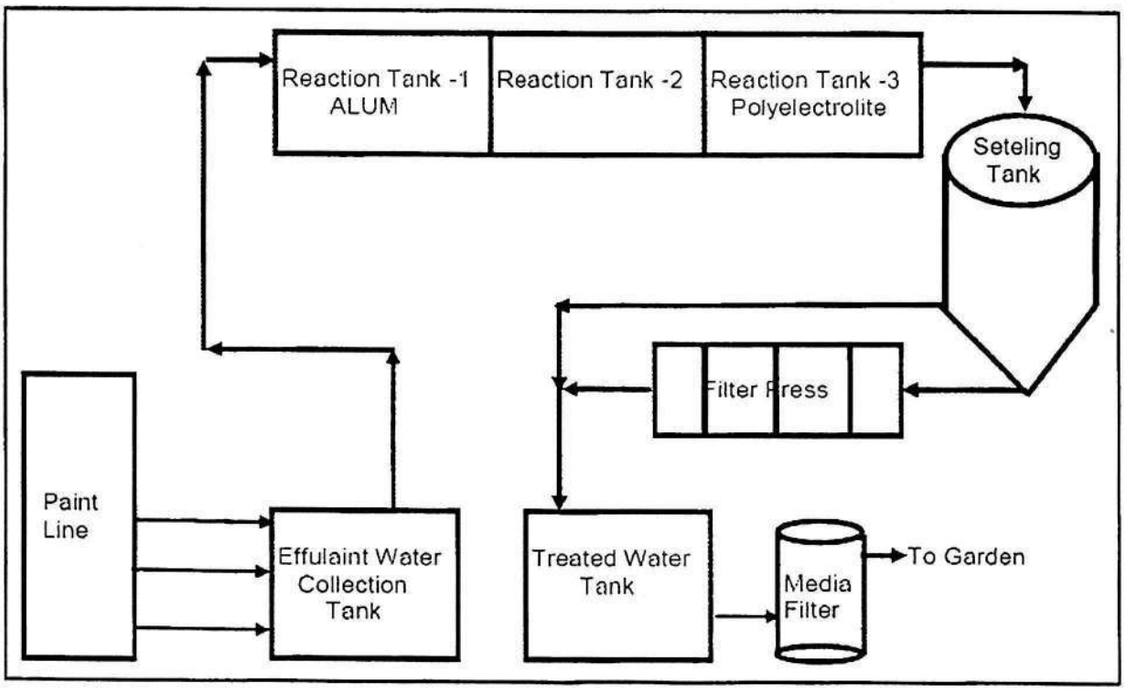
SN	Categories of Hazardous Waste	Type of Hazardous Waste	Quantity of Hazardous Waste	Mode of Disposal of hazardous waste
1	5.1	Use Spent Oil	14000 Ltrs/ year	Through Authorized Dealer/ Recycler
2	5.2	Waste or Residues Containing oil	0.500 MT/ Annum	TSDF i.e. Shiwalik Solid Waste Management
3	21.1	Process wastes, residues and sludges.	8.640 MT/ Annum	TSDF i.e. Shiwalik Solid Waste Management
4	33.1	Empty Barrel / Containers contaminated with hazardous wastes/ chemicals	7200 Nos./ Annum	Through Authorized Dealer/ Recycler
5	35.3	Chemical Sludge from Waste Water Treatment.	45 MT/ Annum	TSDF i.e. Shiwalik Solid Waste Management
6	37.1	Sludge from wet scrubber.	01 MT / Annum	TSDF i.e. Shiwalik Solid Waste Management

The industry discharges its wastewater from phosphating process and the quantity of the same is about 20 m^3/day. It also generates domestic effluent about 20 m^3/day. For the treatment of the trade effluent, it has installed physico-chemical treatment followed by settling tank, collection tank and media filter.

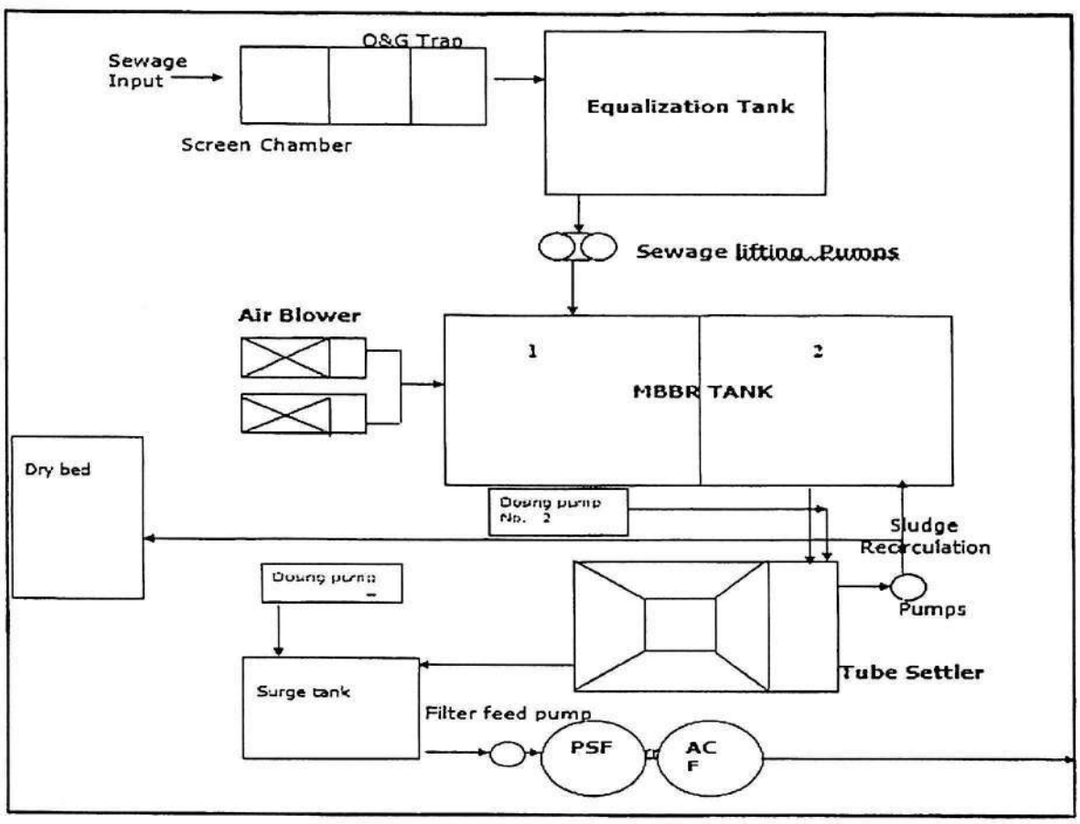
For the treatment of domestic effluent, it has installed STP consisting of oil and grease trap, equalization tank, MBBR, tube settler, activated carbon filter and pressure sand filter. The treated effluent along with treated sewage is discharged into drain leading to Samtel Nallah.

The flow diagrams of the ETP and STP, as submitted by the industry, are mentioned as under:

ETP FLOW DIAGRAM



STP FLOW DIAGRAM



235

2.1 Collection of effluent sample from final outlet of ETP

The Executive Committee visited the effluent treatment plant and sewage treatment plant of the industry on 25.11.2019 and it was observed that the industry has installed an effluent treatment plant consisting of Physico-chemical treatment followed by settling tank, collection tank and media filter.

For the treatment of domestic wastewater, the components of STP are oil and grease trap, equalization tank, MBBR, tube settler, activated carbon filter and pressure sand filter.

In order to assess the performance of effluent treatment plant and sewage treatment plant, the Executive Committee collected the effluent samples from the following points.

1. Inlet of ETP
2. Outlet of ETP
3. Inlet to STP
4. outlet of STP

These effluent samples were sent to Haryana State Pollution Control Board Laboratory for analysis. The analysis results, as received from HSPCB, are annexed as per **Annexure-3**. These analysis results are mentioned as per **Tables-2A and 2B** given below.

Table-2A: Analysis results of effluent samples collected from inlet and outlet of ETP

S. No.	Parameters	Values in mg/l expect pH and conductivity		Permissible limits in mg/l except pH and conductivity
		Inlet to ETP	Outlet of ETP	
1.	pH	9.65	7.55	6.0-9.0
2.	Suspended solid	530	9	100
3.	COD	994.4	38.4	250
4.	Oil & Grease	14	BDL (DL = 2)	10
5.	Conductivity, µS/cm	2320	780	-
6.	TDS	2062	578	-
7.	Dissolved Phosphate	1.826	0.264	5.0
8.	Iron	4.045	0.010	3.0

Table-2B: Analysis results of effluent samples collected from inlet and outlet of STP

S.no.	Parameters	Values in mg/l expect pH and conductivity		Permissible limits in mg/l except pH and conductivity
		Inlet to STP	Outlet to STP	
1.	pH	6.60	7.48	5.5-9.0
2.	Suspended solid	172	11	100
3.	BOD	210	12	30
4.	COD	652.4	42.4	250
5.	Oil & Grease	11.5	BDL (DL=2)	10
6.	Conductivity, µS/cm	1425	770	-
7.	TDS	832	496	-
8.	Dissolved Phosphate	2.056	0.139	-

These analysis results are annexed as per **Annexure-4**

2.1.1 Discussion on the analysis results of effluent samples of ETP and observations of the committee

As per the analysis results of effluent samples collected from inlet to ETP, the various parameters viz. pH, TSS, COD, oil and grease, conductivity, TDS, dissolve phosphate and iron were found to be 9.65, 530 mg/l, 994.4 mg/l, 14 mg/l, 2320 µS/cm, 2062 mg/l, 1.826 mg/l and 4.045 mg/l, respectively.

The values of these parameters at the outlet of ETP were observed as pH:7.55, TSS: 9 mg/l, COD: 38.4 mg/l, Oil and grease: BDL, Conductivity: 780 µS/cm, TDS:578 mg/l, dissolve phosphate: 0.264 mg/l and Iron: 0.01 mg/l. These analysis results indicate that the values of all the parameters in the treated effluent (outlet of ETP) are within the limits prescribed by MoEF/HPPCB. The treatment efficiency in terms of reduction in the values of parameters namely TSS, COD, Oil & Grease, dissolved phosphate and iron was observed as 98.3%, 96.1%, > 99%, 85.5% and 99.8%, respectively. The reduction in the value of TDS was found as 72%. With regard to very high treatment efficiency in terms of removal of TSS, COD, dissolved phosphate and TDS by the components of present effluent treatment system, the Executive Committee is of the view that there is need to carry out the comprehensive study of effluent treatment plant of the industry by collecting 4 hourly composite samples for 24 hours for 2 days so that the actual treatment efficiency in terms of reduction in the values of various parameters of existing ETP of the industry may be assessed.

2.1.2 Discussion on the analysis results of effluent samples of STP

As per the analysis results of effluent sample collected from inlet to STP, the various parameters viz. pH, TSS, BOD, COD, oil and grease, conductivity, TDS and dissolve phosphate were found to be 6.6, 172 mg/l, 210 mg/l, 652.4 mg/l, 11.5 mg/l, 1425

µS/cm, 832 mg/l and 2.056 mg/l, respectively. The values of these parameters at the outlet of STP were observed as pH:7.48, TSS: 11 mg/l, BOD: 12 mg/l, COD: 42.4 mg/l, Oil and grease: BDL, Conductivity: 770 µS/cm, TDS:496 mg/l and dissolve phosphate: 0.139 mg/l. These analysis results indicate that the values of all the parameters in the treated sewage (outlet of STP) are within the limits prescribed by MoEF/HPPCB. The treatment efficiency of STP in terms of reduction in the values of parameters namely TSS, BOD, COD, Oil & grease and dissolved phosphate was observed to 93.6%, 94.3%, 93.5%, >99% and 93.2%, respectively.

Also, during the visit, while inspecting the ETP, the Executive Committee observed that there was a storage room near ETP and STP, which was found containing different kinds of sludge alongwith leach of stored sludge. The Executive Committee collected the effluent sample of leach of stored sludge. The analysis results, as received from HSPCB, are annexed as per **Annexure-5.** These analysis results are mentioned as per **Table 2-C** given below:

Table 2-C : Analysis results of sample collected from leach of started sludge

Sr. No.	Parameter	Values mg/l, except pH and conductivity
1.	pH	8.08
2.	TSS	872
3.	BOD	3600
4.	COD	18504
5.	Oil & Grease	22
6.	Conductivity, Micro S/cm	101530
7.	TDS	8240
8.	Dissolved Phosphate	3.626
9.	Nickel	1.0
10.	Iron	42.954
11.	Zinc	20.166
12.	Copper	0.03
13.	Lead	0.368

2.1.3 Discussion on the analysis results and observations

The analysis results, as mentioned in Table 2-C, indicate that the values of the parameters were observed as pH: 8.08, TSS: 872 mg/l, BOD: 3600 mg/l, COD: 18504 mg/l, O &G: 22 mg/l, Conductivity: 101530 micro s/cm, TDS: 8240 mg/l, dissolved phosphate: 3.626 mg/l, Nickel: 1.0 mg/l, Iron: 42.954 mg/l, Zinc: 20.166 mg/l, Copper: 0.03 mg/l and Lead: 0.368 mg/l.

These analysis results show that the values of TSS, BOD, COD, Oil & Grease, TDS, Iron, Zinc, and Lead are higher than the prescribed limits of 100 mg/l, 30 mg/l, 250 mg/l, 10 mg/l, 2100 mg/l, 3 mg/l, 5 mg/l and 0.1 mg/l, respectively.

2.2 Observations and Recommendations of the Executive Committee

The analysis results of effluent sample collected from outlet of ETP and outlet of STP indicate that all the parameters are within the limits prescribed by the MoEF/HPPCB. However, with regard to very high treatment efficiency in terms of removal of TSS, COD, dissolved phosphate and TDS by the treatment system, the Executive Committee is of the view that there is need to carry out the comprehensive study of effluent treatment plant of the industry by collecting 4 hourly composite samples for 24 hours for 2 days so that the actual treatment efficiency in terms of reduction in the values of various parameters of existing ETP of the industry may be assessed.

Also, the analysis results of effluent sample, which was collected from the leach of the storage shed provided to store the sludge i.e. process wastes residue and sludges, chemical sludge form wastewater treatment plant and sludge from wet scrubber, show that the values of TSS, BOD, COD, oil & grease, TDS, Iron, zinc, and lead are higher than the prescribed limits of 100 mg/l, 30 mg/l, 250 mg/l, 10 mg/l, 2100 mg/l, 3 mg/l, 5 mg/l and 0.1 mg/l, respectively. Further, the said storage shed is temporary having temporary walls around the shed. This temporary storage shed was found containing leach of the stored sludge with very high values of contaminants. The photograph of the temporary storage shed with bags of sludge and leaching effluent is shown as per **Plate-1.**

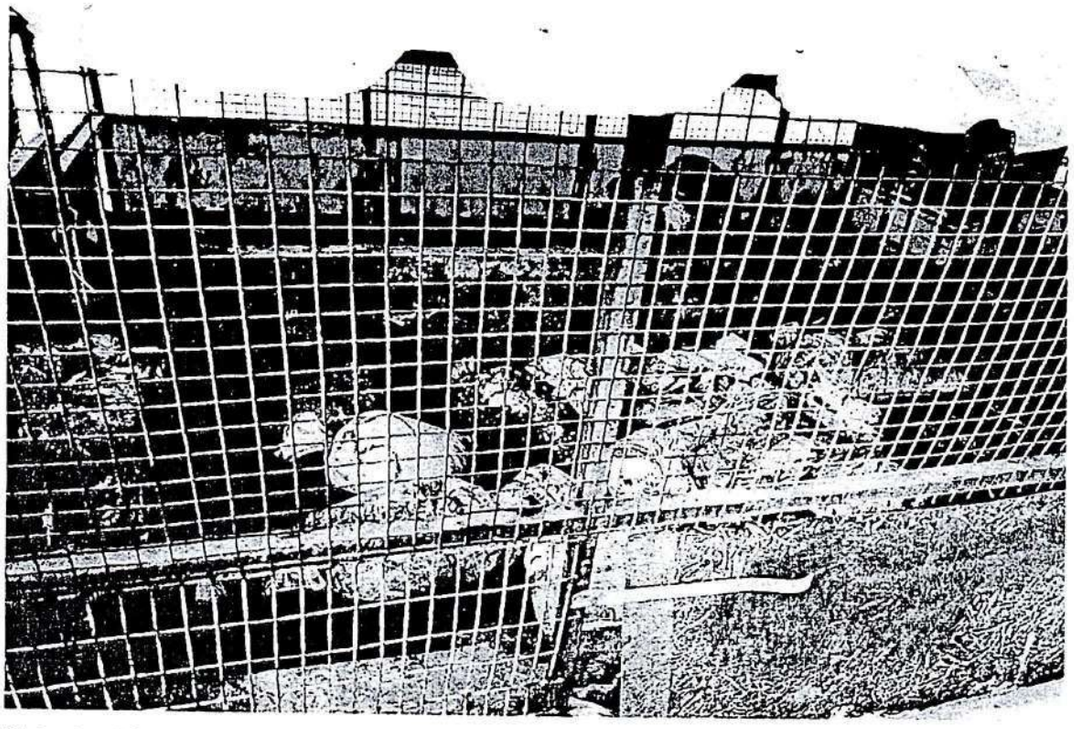


Plate-1: **Photograph showing the temporary storage shed with bags of sludge and leach of the stored sludge.**

239

The executive committee observed that such type of storage of hazardous sludge in temporary storage shed without any proper roof, walls and floor and containing leach of the stored sludge which may seep underground, should not be allowed and that sludge should be stored in a room of adequate capacity with impervious walls and floor and the same should be lifted to the TSDF of Himachal Pradesh within the time schedule as mentioned in the HWM Rules, 2016. The leach of the stored sludge should be treated adequately in the presence of responsible officer of Himachal Pradesh Pollution Control Board before its discharge onto land for plantation.

2.3 Recommendations of the Executive Committee

In the view of the analysis results of leach of stored sludge and non scientific storage of hazardous sludge in temporally storage shed as mentioned above, the Executive Committee has recommended as under:

Chairman, HPPCB shall initiate action to issue directions under the provisions of the Hazardous Waste Management Rules, 2016 as under:

1) To impose an environment compensation amounting to Rs. 35 Lakh as per law and under the provisions of the Hazardous Waste Management Rules, 2016.

2) To revoke the authorization granted to the industry under the provisions of the Hazardous Waste Management Rules, 2016 and consent to operate under the provisions of Water Act, 1974.

3) The industry shall utilize its treated effluent for plantation and gardening purposes and shall not discharge any effluent into Samtel Nallah.

4) The industry shall construct a pucca room with lintel roof, impervious walls and floor of adequate capacity as per the provisions of the Hazardous Waste Management Rules, 2016 within 2 months. The sludge, presently stored in the temporary storage shed, should be disposed off to TSDF immediately.

5) The leach of the stored sludge in the temporary storage shed should be treated adequately in the presence of responsible officer of Himachal Pradesh Pollution Control Board before its discharge onto land for plantation.

6) Chairman, HPPCB shall depute a team under the headship of Senior Level Officer to carry out the comprehensive study of effluent treatment plant of the industry by collection 4 hourly composite sample for 24 hours for 2 days so that the actual treatment efficiency in terms of reduction in the values of various parameters in the existing ETP of the industry may be assess.

7) The industry shall get analyse the characteristics of soil of the plantation / gardening area, where the treated effluent shall be utilized, once in a year from the Agriculture University of Himachal Pradesh.

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

3.0 Tafe Motors & Tractors Ltd. Plot No. 29-30, Sector-02, Industrial Area Parwanoo

3.1 Background

As per record of HPPCB, M/s Tafe Motors & Tractors Ltd. Plot No. 29-30, Sector-02, Industrial Area, Parwanoo was commissioned in the year, 1979 and is engaged in the manufacturing and assembly of transmission gears. It is a large scale orange category industry. The manufacturing processes of the industry are shaving, shaping, grinding, milling, drilling, boring, tapping in machines, hardening in electrical ovens and washing. The industry discharges its trade effluent generated from gear washing process.

For the treatment of trade effluent, it has installed ETP consisting of storage tank, oil skimmer, reaction tank and sand filters and treated effluent is routed to collection tank of STP. For the treatment of domestic effluent, the components of STP are bar screen chamber, oil and grease trap, equalization tank, fluided aerobic reactor, sludge settling tank, cholrine contact tank, dual media filter and activated carbon filter. The treated effluent is utilized for gardening purposes. It has been granted consent under the provisions of Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 and the same are valid upto 31.03.2020. It has also been granted authorization under the provisions of Hazardous Waste Management Rules, 2016 which is valid till 31.03.2023. The industry generates various kinds of sludge, the details of which and their mode of disposal are mentioned in the Table given below:

Table

SN	Categories of Hazardous Waste	Type of Hazardous Waste	Quantity of Hazardous Waste	Mode of Disposal of hazardous wastes
1	5.1	Use Spent Oil	1200 Ltrs/ year	TSDF i.e. Shiwalik Solid Waste Management site.
2	5.2	Waste or Residues Containing oil	35 MT/ Annum	TSDF i.e. Shiwalik Solid Waste Management site.

241

3	33.1	Empty Barrel / Containers contaminated with hazardous wastes/ chemicals	2000 Nos/ Annum	TSDF i.e. Shiwalik Solid Waste Management site.
4	33.2	Contaminated cotton rags or other cleaning materials	30 MT/ Annum	TSDF i.e. Shiwalik Solid Waste Management site.
5	35.3	Chemical Sludge from Waste Water Treatment.	10 MT/ Annum	TSDF i.e. Shiwalik Solid Waste Management site.

3.1 Visit to the industry

The Executive Committee visited the industry on 25.11.2019 and collected the effluent samples from the outlet of ETP-cum-STP. The Effluent Treatment Plant (ETP) of the industry consists of collection tank, oil skimmer, reaction tank with chemical dosing system, sand filter and further leading to collection tank of STP. The components of STP are bar screen chamber, oil and grease trap, equalisation tank, fluidised aerobic reator, settling tank, chlorine contract tank, dual media filter and activated carbon filter. The treated effluent is utilized for gardening purposes.

In order to assess the performance of ETP-cum-STP, effluent sample from the outlet of ETP-cum-STP was collected and the same was sent to Haryana Pollution Control Board Laboratory, Panchkula for analysis. The analysis results, as received from HPSCB, are annexed as per **Annexure-6**. These analysis results are mentioned as per **Table-3** given below:

Table 3 : Analysis results of effluent sample

Sr. No.	Parameter	Value
1.	pH	7.31
2.	TSS, mg/l	20
3.	BOD, mg/l	15
4.	COD, mg/l	74.8
5.	Oil & Grease, mg/l	BDL (DL=2)
6.	Conductivity, Micro S/cm	1371
7.	Total Coliform, MPN/100 ml	221000
8.	Fecal Coliform, MPN/100 ml	17000

3.2 Discussion on the analysis results and observations:

As per the analysis results, the values of the parameters in the treated effluent were observed as pH 7.31, TSS: 20 mg/l, BOD: 15, COD: 74.8 mg/l, Oil & Grease: BDL, Connectivity : 1371 are within the limits prescribed.

However, the values of T.Coli (2,21000 MPN/100ml) and F.Coli (17000 MPN/100ml) have been found higher than the permissible value of 1000 MPN/100 ml which indicate

242

that chloride dosing system provided by the industry is not adequate and dosing of chlorine is not imparted sufficiently to kill T.Coli & F.Coli parameters to bring them within the permissible limits.

3.3 Recommendations of the Committee

In view of the analysis results and observations, the following recommendations are made by the Executive Committee.

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

i) To impose an environmental compensation amounting to Rs 15 lakh upon the industry. The said amount may be utilized for rejuvenation of the quality of the environment.

ii) The consent granted to the industry under the provisions of the Water Act, 1974 may be revoked.

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

Dr. Babu Ram

17/12/19

Dr.V.K. Hatwal

Ms. Urvashi Gulati,

Justice Pritam Pal,
Former Judge, Punjab and Haryana High Court,
Now as Chairman of the Executive Committee

245

Annexure-1

A) Members of the Monitoring Committee

Sr. No.	Name and Designation	Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab & Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Dr. V.K. Hatwal, Ministry of Environment, Forest and Climate Change, Chandigarh	Member
4.	Dr. Babu Ram, Former Member Secretary, PPCB	Technical Expert

B) Officers of Haryana State Pollution Control Board

1. Sh Raj Kumar, Scientist B
2. Sidharth Bhargava, Assistant Environmental Engineer

C) Officers of Himachal Pradesh State Pollution Control Board

1. Sh Atul Pawar, Assistant Environmental Engineer
2. Sh Shiv Kumar, Junior Environmental Engineer

Annexure-2

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board's Laboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali

Report No. 1786
Dated: 09-12-2019

Description: Received a sample on 26/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Sidharth Bhargava, AEE of HSPCB & Sh. Atul Pawar, AEE of HPPCB alongwith Members of Executive Committee of Ghaggar Constituted by Hon'ble NGT collected from M/s Federal Mogul Anand Bearings India Ltd., Plot No. 5, Sector-2, Parwanoo (H.P.) on 25/11/2019. The sample has been analysed from 26/11/2019 to 09/12/2019.

1.	Sample Code	2048
2	Sample Collected from #	Outlet of ETP
		OBSERVATION
1.	Appearance	Almost Colourless
2	Odour	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	6.56		6.0-9.0	APHA, 4500-H+I
2.	Suspended Solid mg/l	17.0		100	APHA, 2540-D
3.	COD mg/l	139.2		250	APHA, 5220-B
4.	Oil & Grease mg/l	BDL (DL=2)		10	APHA, 5520-B
5.	Conductivity Micro S/cm	2610.0			-
6.	Total Dissolved Solid mg/l	1702.0			-
7.	Chloride (as Cl) mg/l	784.0			-
8.	Iron (as Fe) mg/l	0.124		3.0	-
9.	Zinc (as Zn) mg/l	0.112			-
10.	Copper (as Cu) mg/l	0.04		3.0	-
11.	Lead (as Pb) mg/l	1.304		0.1	-

	JSA1	JSA2	Sc-B	Analyst	Laboratory Incharge
Sample Collected/Not Collected by us					
Sample Consumed in testing	Manjhli	Kiran Bala	Sukhram	Harish Chandra	Rajesh Gahlot

CC to Member Secretary, HPPCB, Himachal Pardesh The test report relate only to the particular sample submitted for testing.

245

Annexure-3

Prevent Pollution

Type of Sample -Monitoring

Haryana State Pollution Control Board's Laboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali

Report No. 1788
Dated: 09-12-2019

Description Received a sample on 26/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Sidharth Bharkava, AEE of HSPCB & Sh. Atul Pawar, AEE of HPPCB alongwith Members of Executive Committee of Ghaggar Constituted by Hon'ble NGT collected from M/s Gabriel India Ltd., Plot No. 5, Sector-2, Parwanoo (H.P.) on 25/11/2019. The sample has been analysed from 26/11/2019 to 09/12/2019.

1	Sample Code	2050	2051
2	Sample Collected from #	Inlet of ETP	Outlet of ETP
		OBSERVATION	
1.	Appearance	Brownish	Colourless
2	Odour	Foul	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	9.65	7.55	6.0-9.0	APHA, 4500-H+
2.	Suspended Solid mg/l	530.0	9.0	100	APHA, 2540-D
3.	COD mg/l	994.4	38.4	250	APHA, 5220-B
4.	Oil & Grease mg/l	14.0	BDL (DL=2)	10	APHA, 5520-B
5.	Conductivity Micro S/cm	2320.0	780.0		-
6.	Total Dissolved Solid mg/l	2062.0	578.0		
7.	Dissolved Phosphate (as P) mg/l	1.326	0.264	5.0	-
8.	Iron (as Fe) mg/l	4.045	0.010	3.0	-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjali | JSA2 Kiran Bala | Sc-B Sukhram | Analyst Harish Chandra | Laboratory Incharge Rajesh Garhia

CC to Member Secretary, HPPCB, Himachal Pardesh The test report relate only to the particular sample submitted for testing.

246

Annexure-4

Hms- B1358

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana
Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1789
Dated: 09-12-2019

Description: Received a sample on 26/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Sidharth Bhargava, AEE of HSPCB & Sh. Atul Pawar, AEE of HPPCB alongwith Members of Executive Committee of Ghaggar Constituted by Hon'ble NGT collected from M/s Gabriel India Ltd., Plot No. 5, Sector-2, Parwanoo (H.P.) on 25/11/2019. The sample has been analysed from 26/11/2019 to 09/12/2019.

1.	Sample Code	2052	2053
2.	Sample Collected from if	Inlet of STP	Outlet of STP
		OBSERVATION	
1.	Appearance	Greyish	Colourless
2.	Odour	Foul	Mild

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	6.60	7.48	5.5-9.0	APHA, 4500-H+
2.	Suspended Solid mg/l	172.0	11.0	100	APHA, 2540-D
3.	BOD mg/l	210.0	12.0	30	IS:3025(P-44)
4.	COD mg/l	652.4	42.4	250	APHA, 5220-B
5.	Oil & Grease mg/l	11.5	BDL (DL=2)	10	APHA, 5520-B
6.	Conductivity Micro S/cm	1425.0	770.0		
7.	Total Dissolved Solid mg/l	832.0	496.0		-
8.	Dissolved Phosphate (as P) mg/l	2.056	0.139		-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjali | JSA2 Kiran Bala | Sc-II Sukhram | Analyst Harish Chandra | Laboratory Incharge Rajesh Garhia

CC to Member Secretary, HPPCB, Himachal Pardesh

The test report relate only to the particular sample submitted for testing.

247

Annexure-5

ftms -- 21359

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board's Laboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana

Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1790
Dated: 09-12-2019

Description: Received a sample on 26/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Sidharth Bhargava, AEE of HSPCB & Sh. Atul Pawar, AEE of HPPCB alongwith Members of Executive Committee of Ghaggar Constituted by Hon'ble NGT collected from M/s Gabriel India Ltd., Plot No. 5, Sector-2, Parwanoo (H.P.) on 25/11/2019. The sample has been analysed from 26/11/2019 to 09/12/2019.

1.	Sample Code	2054
2.	Sample Collected from It	Leach of the storage STP

OBSERVATION

1.	Appearance	Blackish
2.	Odour	Foul

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	8.08			APHA, 4500-H+I
2.	Suspended Solid mg/l	872.0			APHA, 2540-D
3.	BOD mg/l	3600.0			IS:3025(P-44)
4.	COD mg/l	18504.0			APHA, 5220-B
5.	Oil & Grease mg/l	22.0			APHA, 5520-B
6.	Conductivity Micro S/cm	101530.0			-
7.	Total Dissolved Solid mg/l	8240.0			-
8.	Dissolved Phosphate (as P) mg/l	3.626			-
9.	Nickel (as Ni) mg/l	1.0			-
10.	Iron (as Fe) mg/l	42.954			-
11.	Zinc (as Zn) mg/l	20.166			-
12.	Copper (as Cu) mg/l	0.03			-
13.	Lead (as Pb) mg/l	0.368			-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjali | JSA2 Kiran Bala | Sc-B Sukhram | Analyst Harish Chandra | Laboratory Incharge Rajesh Garhia

CC to Member Secretary, HPPCB, Himachal Pardesh The test report relate only to the particular sample submitted for testing.

Annexure-6

RM - 31356

Prevent Pollution

Type of Sample:-Monitoring

Haryana State Pollution Control Board'sLaboratory
SCO-115, 1st & 2nd Floor, Sec-25, Panchkula, Haryana

Test Report

To

The Chairman,
Executive Committee, Constituted by Hon'ble NGT,
4th Floor, 5th Tower, Forest Complex, Sector 68, Mohali.

Report No. 1787
Dated: 09-12-2019

Description: Received a sample on 26/11/2019 of Water collected by Sh. Rajkumar Sharma Sc-B, Sh. Sidharth Bhargava, AEE of HSPCB & Sh. Atul Pawar, AEE of HPPCB alongwith Members of Executive Committee of Ghaggar Constituted by Hon'ble NGT collected from M/s Tafe Motors & Tractors Ltd., Plot No. 29, 30 Sector-2, Parwanoo (H.P.) on 25/11/2019. The sample has been analysed from 26/11/2019 to 09/12/2019.

1.	Sample Code	2049
2.	Sample Collected from #	Outlet of ETP-cum-STP

OBSERVATION

1	Appearance	Almost Colourless
2.	Odour	Odourless

RESULTS

Sr. No.	Parameter Name	Result	Result	Limit	Test Method
1.	pH Value	7.31		5.5-9.0	APHA, 4500-H+I
2.	Suspended Solid mg/l	20.0		100	APHA, 2540-D
3.	BOD mg/l	15.0		30	IS:3025(P-44)
4.	COD mg/l	74.8		250	APHA, 5220-B
5.	Oil & Grease mg/l	BDL (DL=2)		10	APHA, 5520-B
6.	Conductivity Micro S/cm	1371.0			-
7.	Total Coliform MPN/100ml	221000.0			-
8.	Fecal Coliform MPN/100ml	17000.0			-

Sample Collected/Not Collected by us
Sample Consumed in testing

JSA1 Manjali | JSA2 Kiran Bala | Sc-B Sukhram | Analyst Harish Chandra | Laboratory Incharge Rajesh Garhia

CC to: Member Secretary, HPPCB, Himachal Pardesh The test report relate only to the particular sample submitted for testing.

Full information is provided by the field officer.

BDL = Below Detection Limit (DL).

DL = Detection Limit.

Annexure-8

OFFICE OF THE EXECUTIVE COMMITTEE

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

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

To

The Member Secretary,
Himachal Pradesh Pollution Control Board,
Shimla

No. CEC/2019/531
Dated: 1.11.2019

Subject: **Minutes of the 15th meeting held under the chairmanship of Justice Pritam Pal, former Judge, Punjab & Haryana High Court and now as Chairman of the Executive Committee constituted by the Hon'ble NGT in the matter of OA No.138 & 139 of 2016- "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto case) on 31.10.2019 (Thursday) at 2.30 PM at Forest Complex, Sector 68, Mohali.**

Please find enclosed herewith minutes of 15th Meeting of the Executing Committee held with the officers of Himachal Pradesh on 31.10.2019 at 2:30 P.M onwards in the Committee Room, Forest Complex, Sector 68, Mohali, under the Chairmanship of Hon'ble Justice Pritam Pal, Former Judge, Punjab & Haryana, High Court, in compliance to the Hon'ble NGT order dated 07.08.2018 in the matter of OA No. 138 of 2016 and 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case) and Yogender Kumar for your kind information and necessary action please.

It is requested that these minutes may be conveyed under your signatures to all the officers of concerned department of your State under intimation to this office to take further action on the directions given by the Executive committee.

DA/as above.

(Dr. Babu Ram)
Member,
Executive Committee

Minutes of the 15th meeting held under the chairmanship of Justice Pritam Pal, former Judge, Punjab & Haryana High Court and now as Chairman of the Executive Committee constituted by the Hon'ble NGT in the matter of OA No.138 & 139 of 2016- "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto case) on 31.10.2019 (Thursday) at 2.30 PM at Forest Complex, Sector 68, Mohali.

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

At the outset, Chairman of the Executive Committee introduced Ms. Urvashi Gulati, IAS, Former Chief Secretary, Haryana, who has been inducted by Hon'ble NGT as member of the Executive Committee. Senior Environment Engineer, Himachal Pradesh State Pollution Control Board welcomed the committee members and thereafter, agenda of the meeting was taken up for discussion.

Senior Environment Engineer, Himachal Pradesh State Pollution Control Board apprised the action taken by the various stake holder departments of State of Himachal Pradesh w.r.t control of pollution in Sukhna Nallah in Parwanoo area and Jattan Wala Nallah leading to River Markanda in Kala Amb area and presented the status as under:

1. **Action taken report on the decisions taken/directions given in the 14th meeting of the Executive Committee held on 26.8.2019.**

   a) **2 STPs each of capacity 1 MLD for treatment of sewage of Parwanoo area shall be installed and commissioned by 31.03.2021.**

   - Funds amounting to Rs. 5 crore have been tied up.
   - Land available
   - Tender shall be floated by 31.12.2019
   - STPs shall be commissioned by 31.3.2021

   b) **1 CETP cum STP of capacity 5 MLD shall be installed and commissioned to treat sewage / industrial effluent of Kala Amb area by 31.03.2021.**

   - Environment Clearance (EC) applied by SPV as per EIA notification dated 14.9.2006
   - CETP shall be commissioned within 2 years after the grant of EC by MOEF&CC

   c) **HPPCB shall inspect the water polluting industries falling in catchment area of Sukhna Nallah on monthly basis. Surprise inspection of the industries may also be carried out. Action against the defaulting units may be taken.**

   - 56 industries inspected during Sep-Oct, 2019
   - Show case notices have been issued to non complying industries

   d) **HPPCB shall inspect the water polluting industries falling in catchment area of River Markanda and Jattan Wala Nallah on monthly basis. Surprise inspection of the industries may also be carried out. Action against the defaulting units may be taken.**

   - 28 industries have been inspected.
   - Groundwater sampling of 7 industries was conducted.
   - 1 industry was found violating the norms.

251

- Electric disconnection order has been issued and Environment compensation amounting to Rs. 2.5 lakh imposed.

e) The State of Himachal Pradesh shall prepare irrigation schemes for utilization of treated sewage of Parwanoo area and Kala Amb area by 31.12.2019 and funds for the same shall be arranged.

- No irrigation scheme operational or proposed because of topography of the area.

f) Ground water samples from different locations along Sukhna Nallah, Markanda River and Jattan Wala Nallah may be collected as per the frequency already decided in the earlier meetings and data may be analyzed w.r.t. water quality of the ground water of the area.

- No groundwater contamination has been observed in the area as per the analysis results of the laboratory.
- Groundwater sampling of various points in the catchment area of Sukhna Nallah and Markanda River has been carried out on 17.10.2019 and 22.10.2019 and the analysis results are awaited.

g) Deptt. of Health & Family Welfare shall regularly conduct Health Check up Camps in the towns / villages located in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah.

- Total 10 health camps have been organized.
- In the 10th camp organized on 15.10.2019 at village Khairi, Trilokpur road, kala Amb and 223 patients were examined but no water borne diseases has been detected.

h) District Level Special Task Force (DLSTF) of the concerned districts shall visit the industries and other water polluting sources on monthly basis and action may be recommended to HPPCB against the violating industries / culprits.

- No inspection has been carried out by DLSTF.
- MS HPPCB has inspected Parwanoo area twice on 6.9.2019 and 2.10.2019.

With respect to other points as mentioned in the agenda, Senior Environmental Engineer, HPPCB submitted the status as under:

1. Status of installation of 2 STPs each of capacity 1 MLD for Parwanoo town

- Rs. 5 crore has been allocated in the budget by the State Govt. for installation of STPs.
- STPs shall be completed by 31.3.2021.

2. Status of installation of 1 CETP cum STP of capacity 5 MLD in Kala Amb area

- EC applied as per EIA notification dated 14.9.2006.
- CETP shall be installed within 2 years from the date of grant of EC by MOEF&CC.

3. **Details of the industries inspected which are located in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah and action taken against the violating industries.**

Catchment area of Jattan Wala Nallah and River Markanda

- 28 industries falling in the catchment area of River Markanda and Jattan Wala Nallah were inspected.
- 15 effluent samples from the industries were collected.
- 7 groundwater samples were collected.
- 1 industry found violating the norms, has been issued orders for disconnection of electric connection along with environment compensation amounting to Rs. 2.5 Lakh has been imposed.

Catchment area of Sukhna Nallah

- 56 industries were inspected.
- Show case notices have been issued to non complying industries.

4. **Status of installation of STPs for the villages in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah.**

- 2 STPs each of capacity 1 MLD has been proposed for Parwanoo town including entire area under the jurisdiction of MC Parwanoo and some parts of adjoining Panchayat areas.
- 1 CETP cum STP of capacity 5 MLD has been proposed for Kala Amb area.
- For treatment of sewage of villages Trilokpur, Johran and Kheri Panchayat area, separate STP of capacity 2.5 MLD has been proposed.

5. **Status of ground water sampling carried out in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah**

- No groundwater contamination has been observed in catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah.
- Groundwater sampling has been conducted on 17.10.2019 and 22.10.2019 and the analysis results are awaited.

6. **Status of Health Camps organized during the month September and October, 2019.**

- 10 health camps have been organized in the habitation areas falling in the catchment area of Sukhna Nallah and no water borne disease was detected.
- Health camps are being organized by department of Health and Family welfare on monthly basis in Kala Amb area.
- 10 health camps have been organized so far.
- In the health camps organized in the month of Sep, 2019, in village Johron, kala Amb, 173 patients were examined and in month of Oct, 2019, 223 patients have been examined.
- No water borne disease was detected

7. **Action taken report of the District Level Special Task Force (DLSTF).**

- 9 meetings of DLSTF of district Sirmaur have been conducted.
- The minutes of the meeting are uploaded on the website of HPPCB and CPCB.
- 12 meetings of DLSTF of district Solan have been conducted.

253

- The minutes of the meeting are uploaded on the website of HPPCB and CPCB.

8. Water quality of Sukhna Nallah at Parwanoo, River Markanda and Jattan Wala Nallah at Kala Amb.

Water quality of Sukhna Nallah at Parwanoo

- Water quality of Sukhna Nallah as monitored during July, 2019 to Sep, 2019 indicates that all the parameters are within the norms.
- Water quality of Samptel Nallah, a contributory drain of Sukhna Nallah, has been monitored from April, 2019 to Sep, 2019 and the analysis results indicate that in the month of April, 2019 and may, 2019, the values of BOD (1650 and 1500 mg/l) and F.Coli (1600 and 32000 MPN/100ml) were observed which are much higher than the permissible limits and the values are exorbitantly high. This needs clarification and re-analyses.
- Water quality of Sector-4 Nallah, before confluence with Sukhna Nallah has been monitored from April, 2019 to Sep, 2019 and analysis results indicate that in the month of April, 2019 and may, 2019, the values of BOD (85 and 100 mg/l) and F.Coli (1600 and 16000 MPN/100ml) were observed which are much higher than the permissible limits and the values are exorbitantly high. This needs clarification and reanalysis.
- The water quality of Kaushalya River, as monitored during Jan, 2019 to Aug, 2019, indicates the value of all the parameters are within the norms.

Water quality of River Markanda and Jattan Wala Nallah at Kala Amb

- HPPCB is regularly monitoring the water quality of River Markanda and Jattan Wala Nallah.
- Analysis results indicate that the level of BOD and F.Coli in the Jattan Wala Nallah has been observed to be 35 mg/l and 22000 MPN/100ml, respectively, which are much higher than the permissible limits.

After detailed deliberation, the Chairman of the Executive Committee directed as under:

1. For installation of 2 STPs each of capacity 1 MLD for treatment of sewage of Parwanoo area, the concerned department shall float tender by 31.12.2019 and STPs shall be installed and commissioned by 31.03.2021.
2. For installation of 1 CETP cum STP of capacity 5 MLD, immediate steps may be taken to get Environmental clearance from MOEFF&CC by SPV and the officers of HPPCB shall facilitate to get EC at the earliest.
   CETP cum STP shall be commissioned by 31.3.2021.
3. STP of capacity 2.5 MLD for treatment of sewage of villages Trilokpur, Johran and Kheri shall be installed by 31.3.2021
4. HPPCB shall inspect the water polluting industries falling in catchment area of Sukhna Nallah, Jattan Wala Nallah, River Markanda on monthly basis. Surprise inspection of the industries should also be carried out and action against the defaulting units may be taken under the provisions of the Water Act, 1974.

5. The State of Himachal Pradesh shall prepare Action Plan for utilization of treated sewage of the town Parwanoo and Kala Amb area for irrigation by 31.12.2019 and funds for the same shall be arranged.
6. HPPCB shall continue to analyse groundwater samples from different locations along the catchment area of Sukhna Nallah, Markanda River and Jattan Wala Nallah as per the frequency already decided in the earlier meetings and data may be analyzed w.r.t. water quality of the ground water of the area.
7. Deptt. of Health & Family Welfare shall regularly conduct Health Check up Camps in the towns / villages located in the catchment area of Sukhna Nallah, River Markanda and Jattan Wala Nallah.
8. District Level Special Task Force of the concerned districts should visit the industries and other water polluting sources on monthly basis and action may be recommended to HPPCB against the violating industries / culprits under intimation to Executive Committee.
9. HPPCB shall identify the pollution sources contributing high value of BOD (85 and 100 mg/l) and F.Coli (1600 and 16000 MPN/100ml) in Sector-4 Nallah before confluence with Sukhna Nallah within 7 days as observed during the monitoring carried out from April, 2019 to Sep, 2019 and take immediate steps to get install water pollution control measures from the responsible agencies.
10. HPPCB shall identify the pollution sources contributing high value of BOD (1500 and 1650 mg/l) and F.Coli (1600 and 32000 MPN/100ml) in Samptel Nallah, a contributory drain of Sukhna Nallah within 7 days as observed during the monitoring carried out from April, 2019 to Sep, 2019 and take immediate steps to get install water pollution control measures from the responsible agencies.
11. HPPCB shall continue to monitor the water quality of Sukhna Nallah, River Markanda and Jattan Wala Nallah and River Kaushalya at different locations as already earmarked and data may be analyzed w.r.t. improvement in the water quality of Sukhna Nallah, River Markanda and Jattan Wala Nallah.

11/2019

(Dr. Babu Ram)
Member,
Executive Committee

Minutes approved.

1.11.19.

(Justice Pritam Pal)
Former Judge, Punjab and Haryana High Court,
(Chairman of the Executive Committee)

255