Status Report in compliance of orders of Hon'ble National Green Tribunal passed in OA No. 801/2018 titled Jasmeet Singh Versus State of Himachal Pradesh:

The Hon'ble National Green Tribunal vide order dated 14th January, 2020 in OA No. 801/2018 titled 2018 titled Jasmeet Singh Versus State of Himachal Pradesh, related to pollution in River Balad in Baddi industrial area, District Solan on account of leakage of Common Effluent Treatment Plant (CETP) passed following orders :-

"let the necessary steps be taken by the State PCB in coordination with other stakeholders to ensure that deficiencies pointed out are remedied at the earliest by preparing and executing an action plan. Further status report as on 31.03.2020 may be filed before the next date by email at judicial-ngt@gov.in."

The HP State Pollution Control Board had already taken cognizance of the above issue and formed a committee on 19th September, 2019, comprising of senior officers to inspect the complete operation of Common Effluent Treatment Plant (CETP) at Baddi. The committee inspected the CETP on 26th September, 2019 and submitted its report. The copy of report is enclosed as Annexure-I.

As per the observation of committee, the existing treatment system of CETP was not adequate for the treatment of high TDS/FDS wastewater being received at the inlet of CETP, there were operational problems at the inlet pipelines carrying wastewater at CETP, Online system for measurement of effluent quality was non functional and there was persistent non-compliance of discharge norms at the outlet of CETP. Accordingly, the HPSPCB has issued directions to the operators of CETP to take corrective and preventive measures and also imposed environmental compensation for non-compliance.

In compliance of above referred direction issued by Hon'ble Tribunal on 14th January, 2020, the matter was taken up with Stakeholders i.e. M/s Baddi Infrastructure (Operators of CETP, Baddi), member units i.e. M/s Winsome Textile Industries Limited, Baddi & M/s Vardhman Textiles Limited, Baddi on 01.02.2020 along with official from Department of Industries. The minutes of meeting is enclosed as Annexure –II. Following directions were issued:-

1. M/s Baddi Infrastructure to submit detailed action plan cum proposal along with timeline for improvement of Common Effluent Treatment Plant (CETP), Baddi to HPSPCB and Industry Department.
2. Wastewater generating unit's i.e. M/s Winsome Textile Industries Limited, Baddi and M/s Vardhman Textiles Limited, Baddi were directed to submit the detailed action plan cum technological details for up-gradation of their existing Effluent Treatment Plants (ETPs) for treatment of such dyeing effluent in order to reduce FDS load coming at the inlet of CETP Baddi. Since the dyeing wastewater being received at the inlet of CETP, Baddi, and treated at CETP, Baddi, however the CETP is not meeting discharge norms specified w.r.t Fixed Dissolved Solids (FDS) under EP Rules, 1986.
3. The Department of Industries shall take-up the matter of action plan cum proposal for improvement of CETP, Baddi immediately for its necessary funding in view of Hon'ble NGT directions dated 14.01.2020.

Accordingly, Action Plans were received. The Action Plans of M/s Winsome Textile Industries Limited, Baddi and M/s Vardhman Textiles Limited are enclosed as Annexure – III & IV respectively. The Action Plan submitted by M/s Baddi Infrastructure (Operators of CETP, Baddi) for improvement in the functioning of CETP, Baddi is enclosed as Annexure –V.

Following are salient features of the action plan submitted by above stakeholders.

1. M/s Vardhman Textiles Limited, Baddi submitted Action Plans for treating the category –IV effluent containing high Total Dissolved Solids (TDS)/ Fixed Dissolved Solids (FDS).
2. The Action Plan comprises of 04 Stages i.e. Revamping & revival of existing Effluent Treatment Facility, Finalization of Technology for advanced treatment Scheme (Combination of Membrane technology), Floating of Tenders, Techno-commercial discussions, Finalization of

Vendor, Placement of Order, Equipment Erection, and System Commissioning with completion timeline is 31st December, 2021.

3. The Action Plan of M/s Winsome Textile Industries Limited, Baddi comprises of Revamping and commissioning the existing Effluent Treatment Plant, Infrastructure building for Tertiary Treatment, Pilot Scale study and finalization of advance treatment inform of Ultra Filtration, Nano-filtration and Reverse Osmosis, Erection of Equipment's and commissioning. The timeline for completion is 30th June, 2021.
4. M/s Baddi Infrastructure (Operators of CETP, Baddi) submitted the Action Plan for improvement in the functioning of CETP, Baddi.
5. The Action Plan contains existing initiatives taken for control of parameters such as Colour, Bio-chemical Oxygen Demand, and Sulphide and proposal of Advanced treatment Technologies (Reverse Osmosis along with multiple effect evaporation, dryer) for control of high TDS/FDS wastewater coming from other small scale industrial units having effluent generation less than 200 KLD. The timeline for completion of Action Plan is 31st October, 2021.

In order to discuss the feasibility of the action plans submitted second meeting was held on 18.03.2020 at HP State Pollution Control Board with all stakeholders. The minutes of meeting is enclosed as Annexure –VI. The Stakeholders were directed to revise the action plans submitted w.r.t timelines. So, accordingly, revised action plans received and the details are annexed as Annexure- VII.

The revised timeline for completion submitted by member units i.e M/s Winsome Textile Industries Limited, Baddi & M/s Vardhman Textiles Limited, Baddi is 31st March, 2021, 30th June, 2021 respectively.

The revised timeline for Action plan completion by M/s Baddi Infrastructure (as operators of CETP, Baddi) is 31st March, 2021.

Analysis of Action Plans and observation of the HPSPCB:-

1. The technological proposal submitted by member units' i.e M/s Winsome Textile Industries Limited, Baddi and M/s Vardhman Textiles Limited,

Baddi for treatment of their dyeing wastwater having high Total Dissolved Solids/Fixed Dissolved Solids is adequate to reduce the FDS load at inlet of CETP.

2. The Action Plan submitted by M/s Baddi Infrastructure (Operators of CETP, Baddi) for treatment of high FDS wastewater coming from small scale industrial units having effluent generation less than 200 KLD is adequate to treat the wastewater received at inlet of CETP, Baddi.

3. The member units and operators CETP, Baddi requested for further extension of the abovementioned timelines for completion of action plans, due to unforeseen incident of COVID-19 and subsequent lockdowns.

4. However, as per HPSPCB's observation, the completion timeline submitted by M/s Baddi Infrastructure (Operators of CETP, Baddi) and member units (M/s Winsome Textile Industries Limited, Baddi & M/s Vardhman Textiles Limited, Baddi) is on higher side.

Following are the compliance and recommendation in view of Hon'ble National Green Tribunal order dated 14th January, 2020 :-

1. Govt. of HP, in-consultation with State PCB has already notified revised inlet parameters of CETP w.r.t TSS, COD, BOD, O&G, Sulphide, Ammonical Nitrogen, Total Phosphate, Chromium Hexavalent, Lead, Phenolic Compound and FDS on dated 26.12.2019.

2. A committee may be constituted comprising of District Administration, State Pollution Control Board and Industries Department to review the progress of aforementioned action plans implementation on a monthly basis, if approved and a report in this regard may be submitted to Hon'ble Tribunal at least in every two months till the completion of Action Plans.

Dated:

(Aditya Negi, IAS)
Member Secretary
H.P. State Pollution Control Board

Comprehensive Report of Common Effluent Treatment Plant, Baddi

Incompliance of Head office order No. PCB/Misc./complaint/Baddi/2019-20207-10 dated 19.09.2019, a committee comprising of Dr. Sharawan Kumar, Senior Environmental Engineer, Sh. Parveen Gupta, Senior Environmental Engineer and Sh. Chandan Kumar Singh, Assistant Environmental Engineer visited the Common Effluent treatment Plant (CETP) at Baddi on dated 26.09.2019. The committee inspected the CETP, its operational units and evaluated the overall functioning. The details report is as below:-

The CETP is located at Village Kenduwal on Baddi Nalagarh Highway along the bank of River Sirsa with designed capacity of 25 MLD. At present, Total **443** industrial units from the catchment of Baddi- Barotiwala and some parts of Nalagarh region are connected with CETP with existing operational capacity is 17.5 MLD. The effluent coming from connected industrial units is divided into five category as follows:-

Sr. No.	Type	Category of industries	Capacities, MLD	No of Units	Status of Pipeline
1.	Category –I	Food, Paper, Textile	15.55	89	Functional
2.	Category –II	Soap, Detergent	2.0	109	Functional
3.	Category –III	Pharmaceutical	2.9	212	Functional
4.	Category –IV	Concentrated Dyes	2.0	02	**Not Functional**
5.	Category –V	Metal Finishing	0.042	31	Functional

All the effluent coming into Common Effluent treatment Plant (CETP) from category –I to Category –V are fed into separate equalization tanks, followed by physico-chemical treatment into chemical dosing tanks for category II, V and primary settling of all category effluents. The category –IV effluent is partially received as the pipeline is not functional since last 01 year due to choking.

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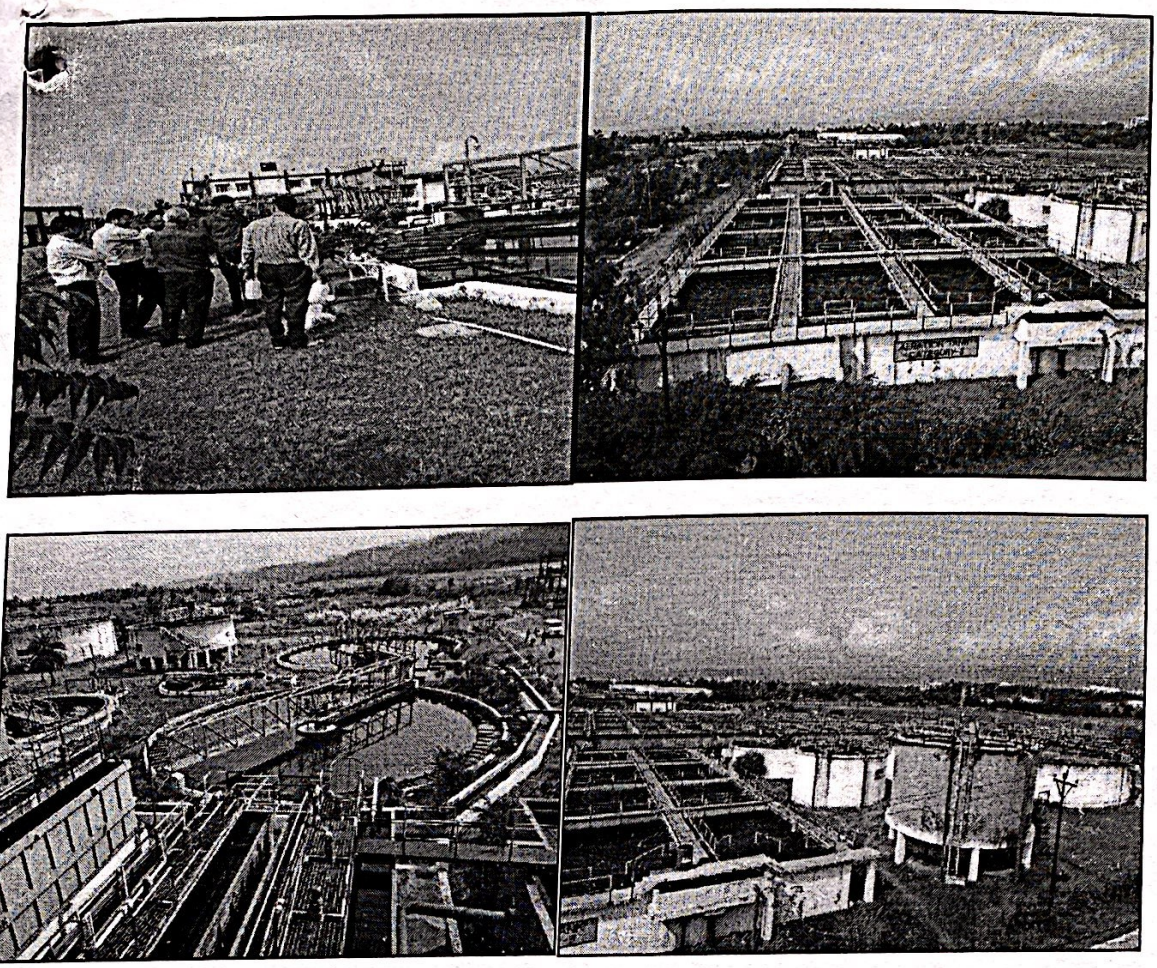

Pic : Photographs depicting the inspection and sampling of Common Effluent Treatment Plant

The remaining portion of Category –IV effluent is getting mixed into category – I pipeline. The primary settled effluent of category I, II, III, IV is further subjected to biological treatment into Aeration tanks provided for Category –I and combined for Category –II, III, IV. This is followed by secondary settling and second stage chemical treatment in reaction tanks for category –I, II, III and Category IV.

The category - V, which the effluent from Metal Finishing units, is received through tankers and subjected to equalization, physico-chemical treatment in dosing tanks followed by settling in tube settler. The final treated effluent from all categories are fed into Tertiary Clarifier (3 Nos) before final discharge. Detailed Flow Chart is attached as **Annexure –I.**

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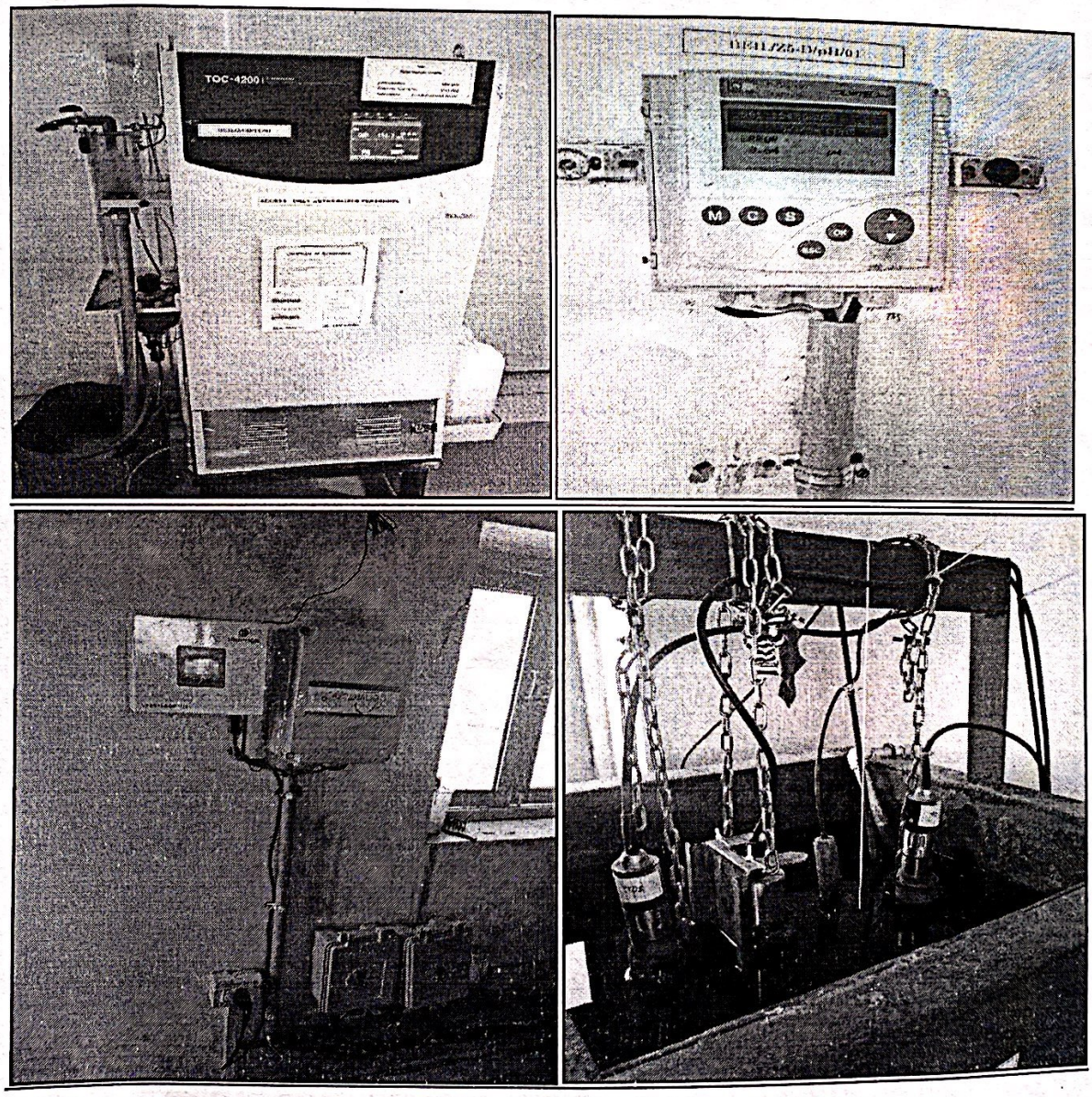
Some industrial effluent is also received through Tankers from Bhud, Katha and Nalagarh region supplementing the category II and category –III.

At present, the final treated effluent of CETP is approximately 17-18 MLD, which is finally discharged on River Sirsa at 800 meter downstream from located CETP though underground pipeline. The online flow measurement and effluent quality continuous online measurement device is provided at the common discharge point of all three Tertiary Clarifier at CETP.



Pic : Photographs online system providedat CETP, Baddi

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Observation made by Committee w.r.t functioning of Common Effluent treatment Plant (CETP)

1. The pipeline of Category –IV is not functional due to choking of the pipeline. The pipeline carries the concentrated effluent of textile units engaged in dyeing namely as M/s Auro Textile Unit-I, Sai Road, Baddi, M/s Auro Dyeing Unit-I, Sai Road, Baddi and M/s Winsome Textiles Industries, Unit- 1, Sai Road Baddi, Tehsil Baddi, Distt. Solan, H.P.

2. The effluents from above mentioned units carry vey high TDS (Total Dissolved Solids) around 22,000 mg/L, Chloride and Sulphide contents.

3. Due to choking of pipeline the major portion of this effluent is combined with category –I,and treated in treatment system which is not designed to carry high level of TDS, Chloride and Sulphide value.

4. The existing overall treatment scheme for all categories is not capable to treat the high level of TDS, Chloride and Sulphide value.

5. The existing overall treatment scheme for all categories doesnot have tertiary treatment facility inform of Pressure filtration and further advanced treatment of membrane filtration.

6. Fishpond provided adjacent to Tertiary Clarifier, which is not connected to final treated effluent discharge line.

7. Online flow measurement and effluent quality continuous online measurement device is operational for pH, and COD, however instrument displaying TSS and Conductivity was out of order.

8. The work of sewer network for integration of 5.5 MLD Sewage from Baddi region is almost completed, along with construction of Collection Sump, however connectivity is not completed as yet.

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9. Sewage treatment of 5.5 MLD is to be treated through Equalization followed by mixing in Aeration Tank-I (Category –I Stream) and secondary Clarifier, then second Stage Biological treatment into MBBR system and finally to last stage Chemical Treatment.

10. The Pollution load in Rivers Sirsa with CETP discharge at 17.5 MLD with Bio-Chemical Oxygen Demand (BOD) 5 Days 20^0C (20 mg/l) is around 340 Kg/day. The lean season flow of River Sirsa as obtained from IPH Department is 36.17 MLD. The BOD value coming out after dilution at downstream is 6.9 mg/L whereas target of achieving the BOD value is less than 03 mg/l as per directions of Hon'ble NGT vide OA No. 673/2018. This indicates that CETP is not functioning as per this target and requires up-gradation w.r.t Bio-logical treatment.

Recommendation of the committee

1. The textile units engaged in dyeing in the area should install their own treatment system for the treatment of Category –IV effluent that is high concentration effluent as the CETP is not having treatment facility for such effluent treatment. This treatment by these units is also compulsory in compliance of Supreme Court order WPIL No. 375 of 2012 in the matter of Paryavaran Suraksha Samiti Vs union of India & Ors to control the pollutants contributing to TDS, Chloride and Sulphide. This is mandated in EP Rules, 1986 wherein It is directed that *"Any textile unit attached with Common Effluent Treatment Plant shall achieve the Inlet and treated quality Standards as specified under Shedule-I of Environment (Protection)Rules, 1986 and shall also jointly and severely responsible for ensuring compliance."*

2. Fishpond provided adjacent to Tertiary Clarifier, which is not connected to final treated effluent discharge line. Provision to connect such Fishpond to discharge from Tertiary Clarifier shall be made along with provision of Bio-assay Test (1:8 dilution of effluents).

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3. All the online monitoring flow measurement and effluent quality continuous online measurement devices shall be made functional, calibrated and updated with data connectivity from SPCB and CPCB server. The record to this to be maintained.

4. CCTV cameras for e-surveillance were not found installed at any component inlets/outlets of CETPs, so it requires its installation immediately at inlet and outlets and should be connected with SPCBs server.

5. The lean season flow of River Sirsa is 0.4186 m3/sec and to maintain BOD value less than 03 mg/l as per directions of Hon'ble NGT vide OA No. 673/2018 there is need to bring down the BOD at final outlet of CETP less than 10mg/l by 31st March,2021.

In addition to above it is also recommended that the sewage from other left out areas i.e. Barotiwala , Jharmajri , Kalujhanda etc. should have sewage treatment system or be connected to CETP. Similarly the industrial sewage of industrial areas of Baddi , Barotiwala region under DIC and HPSIDC shall also be directly connected with CETP via sewer network to improve the quality of River Sirsa.

Er. Chandan Kumar Singh
Assistant Environmental Engineer

Er. Parveen Gupta
Senior Environmental Engineer

Dr. Sharawan Kumar
Senior Environmental Engineer

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H.P. STATE POLLUTION CONTROL BOARD,
"HIM PARIVESH" PHASE-III, NEW SHIMLA-171 009 (H.P)
Phone: 0177 2673766, 2673274 Fax: 0177 2673018

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Minutes of Meeting held on 1st February, 2020 at Conference Hall of HPSPCB regarding Action to be taken in view of Hon'ble NGT order in OA No.801/2018 titled Jasmeet Singh V/s State of HP' others dated 14.01.2020 pending before the Hon'ble NGT Delhi.

Meeting to discuss the action to be taken in view of Hon'ble NGT order OA No.801/2018 titled Jasmeet Singh V/s State of HP others pending before the Hon'ble NGT Delhi was held on 1.2.2020 at Conference Hall of HPSPCB.

At First, Sh. Aditya Negi, IAS, Member Secretary (MS), Himachal Pradesh State Pollution Control Board (HPSPCB), welcomed all the stakeholders and thereafter, Assistant Environmental Engineer, HPSPCB, Shimla briefed [redacted] w.r.t Hon'ble NGT order dated 14.1.2020 above matter and also the status report of Common Effluent Treatment Plant, Baddi and Textile Industries (Member Dyeing Units) of CETP Baddi submitted by Committee to Hon'ble NGT.

The List of Officials attended the meeting is enclosed as Annexure- I.

Thereafter, with the permission of the Member Secretary, HPSPSCB, Assistant Environmental Engineer, requested the representative of the Baddi Infrastructure to brief the action plan submitted for improvement in the functioning of CETP Baddi. Mr. R.Guleria on behalf of Baddi Infrastructure presented following points:

1. The repair and Maintenance work of choked category IV pipeline shall be completed by 15th March, 2020.
2. The Category IV (CETP , Baddi) effluent generating units (M/s. Vardhman and Winsome Textiles) is in process of upgrading their existing Effluent Treatment Plant's by incorporating advance treatment technology (ROs) through pilot scale study. The timeline for completion of this work is 24 months. The treated water shall be reused by industries within their premises.
3. The Action Plan for up-gradation of existing treatment structure of CETP Baddi is prepared and total cost of the proposal is 10 crores.
4. The "Sulphide" parameter is also required to be addressed with 73 industries which are primarily responsible and BI is guided such industries to treat Sulphide at their own level in their existing ETPs.
5. Action has been taken for the improvement in existing biological process by enhancing the aeration capacity, to improve on marginally exceeding BOD parameter.

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In addition to above, the representative of Baddi Infrastructure requested the HPSPCB to address on following issues:

1. Action on industries which are not discharging their waste water to CETP Baddi and also drastically reduced waste water generation as against their consented capacity.
2. Review the Inlet Water Quality Standards Notified by the Govt. of HP by involving all the stakeholders.

After detailed deliberation and discussion on above points, following directions have been issued by the Member Secretary, HPSPCB.

1. Baddi Infrastructure shall submit detailed action plan cum proposal along with time line for improvement of CETP immediately to HPSPCB and Industry Department.
2. M/s. Winsome Textile and M/s. Vardhman Textile Ltd. Baddi shall submit detailed action plan along with time line and proposed technological detail for up gradation of existing ETP's for treatment of category IV effluent along with existing action taken report.
3. The Industry Department shall take up the matter of action plan cum proposal of Baddi Infrastructure for improvement of CETP Baddi, immediately for its necessary funding in view of Hon'ble NGT Directions dated 14.01.2020.

The meeting ended with vote of thanks to the chair.

(Aditya Negi, IAS)
Member Secretary

Endst. No. M/s. Baddi Infrastructure/Baddi/Consent Branch/ 1263-66 **Dated:** 3/2/2020

Copy forwarded to the following for information and necessary compliance as per Hon'ble NGT Order:

1. The Director of Industries, Udhyog Bhawan, Shimla, HP.
2. The Senior Environmental Engineer cum RO, Baddi.
3. The Chief Executive Officer, M/s. Baddi Infrastructure, Baddi, Distt. Solan, HP.
4. PA to Member Secretary, HPSPCB, Shimla.

(Aditya Negi, IAS)
Member Secretary

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CIN : L17115HP1980PLC005647
E-mail : wtil@winsometextile.com
Website : www.winsometextile.com

WTIL/ETP/19-20/ 850

Date :-19-02-2020

To

Member Secretary,
H.P. State Pollution Control Board,
Him Parivesh,Phase-III,
New Shimla-171009

H.P. State Pollution Control Board
Dy. No. 13386
Date 24/2/2020
Shimla - 9

Sub :- Permission to treat Category IV effluent in Plant

Dear Sir,

In reference to your office letter no-PCB/1435/M/S Winsome Textiles Ltd./2020-1529-30 Dated 28-01-2020 and we wish to submit our detailed scheme for treatment of Cat IV effluent in our plant along with technolgy to be used with time line.

Cat- IV Effluent treatement scheme is devided in three phases.

Phase-I :-In this scheme, effluent pass through Physio chemical cum biological treatment upto secondary clarifier. Revamping of existing ETP is going on full swing and this scheme is to be fully operational by 29th Feb.2020. We hope to achieve results well within new prescribed pre treatment parameters except FDS vide notification Govt.of H.P. No.STE-F(2)-1/2017 dated 26-12-2019.

Phase-II :-In this scheme, total new infrastructure has to be made including Civil and mechanical work .Effluent should pass through tertiary tretament and allied scheme is to be made operational by 30thJune. 2021. Treated water through this scheme to be fed to phase-III i,e TDS reduction.

Phase-III :-For this scheme,we have already appointed a consultant to advise us on the suitable technology. With referance to the discussions held with our consultant and various vendors, approximately 24 months i,e. 3 months for testing of effluent and 21 months thereafter are required to implement the scheme to achieve FDS level 2100 mg/ltr or below in CAT IV effluent and details given in Table. It includes as learned authentically from various vendors and our consultant, ordering of equipment, trial runs, its commissioning and successful running. For this scheme total new infrastructure has to be made and effluent should pass through Ultra filteration,Nano and RO system and to be operational by 31th Dec 2021. treated water @75% to be used in the process ,rest may be discharged to CETP as per parmeters given in Govt.Of H.P. Notification.

P-1/2

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Table

Sr No	Description of Jobs to be done	No of Month
1	Testing of Effluent	3 (01-01-2020 to 31-03-2020)
2	Selection of Scheme & Order finalization	4 (01-04-2020 to 31-07-2020)
3	Finalization of Drawing	2 (01-08-2020 to 30-09-2020)
4	Civil work & Supply of equipment	9 (01-10-2020 to 30-06-2021)
5	Erection of equipment	3 (01-07-2021 to 30-09-2021)
6	Trial run and Commissioning of plant	3 (01-10-2021 to 31-12-2021)
7	Total	24 months

Therefore, Scheme will be fully operational on or before 31th Dec.2021.

Thanking you.

Your's sincerely,
For Winsome Textile Industries Ltd.

(Anil Sharma)
Chief Executive Officer

CC:- 1.Sr.Env.Engineer ,HPS PCB,Baddi

2. CEO, Baddi Infrastructure,BTTI Center,EPIP,Jharmajri,Baddi

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State Pollution Control Board
Dy. No. 13757
Date 29-2-20
Shimla - 9

Feb 26, 2020/ 1123

The Member Secretary,
H.P. State Pollution Control Board,
Him Parivesh, Phase-III,
New Shimla-171009

Sub: Permission to treat Category-4 Effluent in-house - Action Plan & Timelines

Dear Sir,

SEE 10/2/20
DA (Baddi)

This is in reference to your office letter No-PCB/7/Vardhman Textiles Ltd. / 2020-1531-32 dated 28-01-2020 permitting in-house treatment of Category 4 effluent of our three units located at Baddi viz; Auro Textiles, Auro Dyeing and Auro Textiles -2 and asking us to submit an action plan and clear timelines for the same.

29/2/20

As you are aware, in the year 2010, vide H.P. Govt. notification no. Ind. A (E) 1-8/2008/1 dated 27th October 2010, we were advised to close down our own ETP operations and mandatorily become a member of the CETP. It is pertinent to mention here that we had state of the art ETP's running in our Units with technology from WTT, Italy, which had to be closed down and abandoned due to this notification.

Accordingly, we started supplying Cat -1 (low TDS) and Cat -4 (higher TDS) effluents to the CETP, Baddi operated by UPL/BEIL. The specifications of total discharge and its parameters from our aforesaid three units have always been well within the limits of declaration form duly signed along with the respective units.

Later, we also started pre-treatment of our effluent as per the H.P. Government Notification dated 17th March, 2018 laying down the revised norms of pH, TSS, Oil and Grease levels.

Subsequent to the visit of the NGT Monitoring Committee to CETP, Baddi and revision of CETP inlet parameters by HP Govt. vide notification no. STE-F(2)-1/2017 dated 26th Dec'2019, it became essential for us to revive our in-house ETP's so as to prepare ourselves to meet the revised CETP inlet norms.

The revamp and revival of our in-house ETP's enables us to meet the revised CETP inlet norms of major parameters other than FDS viz; pH, BOD, COD & TSS for Cat-4 effluent. As you are aware, for control of FDS for which no norm was in existence till 2016, setting up of Nano

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ration System was planned at CETP in Phase-II for which funding was to be made by the CETP promoters. But since the Phase-II of the project has remained un-implemented, looking into the urgency and sensitivity of the matter, we took a decision and approached to seek your kind permission to treat CAT-4 effluent in-house which now stands accorded vide your letter No-PCB/7/Vardhman Textiles Ltd./2020-1531-32 dated 28-01-2020.

The project to treat Cat-4 effluent of all the three units in-house necessitated not only major revamping and upgradation of Effluent Treatment System but also selection of appropriate technology and installation of new infrastructure involving substantial investment.

We may add that selection of appropriate technology for control of FDS is the most critical part of the project as it is dependent upon a comprehensive study and analysis of the attributes and characteristics of complex Cat-4 effluent with the involvement of experts as also requires pilot plant studies to be carried out. The system design, technology and treatment scheme has to be customized w.r.t. the specific effluent characteristics and any mistake therein can jeopardize the entire project.

Looking into the magnitude and criticality of the project, we have therefore, decided to implement the entire project in the following 5 phases:-

Phase 1 – Revamping and upgradation of existing ETP system:

This phase involves the following activities:

a) Diversion & Collection of Cat-4 stream of all the three Units viz; Auro Textiles, Auro Dyeing and Auro Textiles –II into a common Homogenization tank.

b) Revamping of Physio-Chemical Treatment System (wherever required)

c) Revamping of Biological treatment system

This required major civil work as well as replacement and revamping of Mechanical equipment involving an investment of about Rs 3 crores. **We are pleased to inform that a substantial part of this phase has since been executed; it is currently in the final stages of completion and ETP is expected to be fully operational by end Mar'2020.**

We may submit that it is neither desirable nor practically appropriate to partially treat effluent only to meet the CETP inlet parameters and treat it again at CETP. Hence we are carrying out complete physio-chemical and Biological treatment of Cat-4 effluent which not only meets the revised norms of all major parameters (except FDS) prescribed by HP Govt. vide notification no. STE-F (2)-1/2017 dated 26th Dec'2019 but also the CETP discharge parameters as is evident from the following parameters of the in-house treated CAT-4 effluent:-

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Cat-4 Effluent Parameters	pH	COD	BOD	TSS
ETP Inlet	6.00 -9.00	1500-2000	400-650	250-400
ETP Outlet (treated)	7.00 -8.50	230-280	28-35	40-80

This would mean that the treated effluent would not require any further treatment at CETP end.

Phase-2: Discussion with different technology vendors and Study of Effluent attributes for control of FDS:

Under this phase, we have already initiated technical discussions with the following three Vendors involving two different technologies:-

a) Hydrotech, Italy – Spiral Wound Membrane technology
b) Rochem Mumbai – Plate & Tube – Disc Membrane technology
c) ATE, Mumbai - Spiral Wound Membrane technology

After several rounds of discussions, and extensive lab testing of effluents, the Vendors shall install Pilot plants at ETP site and connect to the outlet of ETP for study of characteristics and attributes of effluent for treatability analysis so as to suggest appropriate scheme and technology which could be a combination of Ultra filtration, Nano and RO system, MEE (Multi-Effect Evaporators) & ATFD (Agitated Thin Film Dryer). **Our goal shall be to re-use the recovered water back in the production process.**

This phase would also involve modifications in the existing ETP set-up to meet the required in-feed parameters to RO System for achieving target FDS norm. Such modifications shall involve civil and mechanical work besides installation of additional equipments.

As a deliverable of this phase, the vendors shall submit their proposals suggesting the technology options for our evaluation.

As aforesaid, this phase is very critical from design perspective as any wrong decision may not serve the intended purpose and may become a wasteful effort and investment. **The implementation of this phase is already in progress and we expect to complete the same by 30thJune. 2020.**

Phase-3: Finalization of Technology and treatment Scheme:

Once the basic treatment scheme becomes clear based on the Pilot plant studies and the technical proposals are submitted by Vendors, this phase shall involve appointment of a consultant to evaluate the proposals and guide us in developing basic engineering, BOQ, technical specifications, RFQ and shortlisting of the vendor after preliminary evaluation.

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E: chr@vardhman.com

he consultant based on his evaluation and experience may ask for changes in the treatment scheme suggested by the vendors and after joint discussions, a final decision on the technology shall be taken.

We plan to complete this phase by 31st Aug'2020.

Phase -4: Floating of Tenders, Inviting Offers, Techno-commercial discussions, Finalization of Vendor, Placement of Order and Equipment Delivery:

Based on deliverable of Phase-3 i.e. finalization of treatment scheme and technology, commercial discussions will be held with Vendors and **order shall be placed on the selected vendor by 31st October 2020.**

After placement of order on technology Vendor, we shall finalize construction and engineering drawings under the guidance of Consultant and undertake construction work as well as ordering of ancillary equipments. **The delivery of all major equipments is expected to be completed by 31st July'2021.**

Phase 5: Erection, Commissioning and Stabilization of TDS Control System:

We plan to complete erection of equipments, carry out trial runs and commisioning of system in about 3 months' time and **complete the same by 31st October'2021.**

The **stabilization of system** might take another two months and the system is expected to be running in good condition **in all respects latest by 31st Dec 2021.**

Summary of Action Plan:

Phase	Activity Description	Target Date
1	Revamping and upgradation of existing ETP system	29.02.20
2	Discussion with different technology vendors and Study of Effluent attributes through Pilot Plant trials	30.06.20
3	Finalization of Technology and treatment Scheme under guidance of consultant	31.08.20
4	Commercial discussions, finalization of Vendor, Placement of Order	31.10.20
	Equipment Delivery at Site	31.07.21
5	Erection, Commissioning of TDS Control System	31.10.21
	System Stabilization	31.12 21

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Request for Review of FDS Standards

While we are committed to implement the action plan outlined above under the present framework of standards, it may not be out of place to seek the attention of State & Central Pollution Control Boards as also the Ministry of Environment, Forests and Climate Change to have a relook at the policy for fixing FDS standards for river discharge.

Even in the United States of America and several European Countries, there is no such norm of FDS laid down by the regulators and the treated industrial effluent is permitted to be discharged into river and water bodies. The effluent is however, tested via an aquatic toxicity test at the dilution rate of the effluent in the receiving river – this is the means by which determination is made as to whether the FDS level in the effluent is a problem or not. This seems to be the pragmatic way of dealing with the control of pollution on account of FDS.

In this context, it is also pertinent to state that in India too, there was no standard of FDS till 2016. However, more importantly, it is necessary to examine the quality of water in reference to FDS in Sutlej River where CETP treated effluent is finally being discharged.

On the basis of testing of water samples, we find that given the degree of dilution of CETP treated effluent in the Sarsa River, the current level of FDS of CETP discharge is practically causing no impact on the FDS levels of water flowing in the river.

Further, when the Sarsa River joins Sutlej, the contributory volume of CETP treated effluent is negligible at less than 1%. Such a small contribution is again not causing any adverse impact on the quality of water flowing in the river Sutlej in terms of toxicity levels.

The fact that there is no impact on FDS of water flowing in River Sutlej is validated by a study published by the Government of Punjab and described at page no. 42 of "Action Plan for Clean River Sutlej" dated 05.03.2019.

Interestingly, none of the measured values downstream of confluence point of rivers Sarsa & Sutlej at Ropar right up to Hussainiwala in Ferozpur District indicates high level of FDS at any location. The FDS level at each measured location is well within the norm of drinking water quality laid down by IS:10500:2012 which stands at 500 ppm.

Under National Water Quality Monitoring Programme (NWMP), the FDS and dissolved oxygen (DO) levels of River Sutlej are being constantly monitored by CPCB. The relevant data for year 2019 is attached for your kind perusal.

The proposed treatment of FDS as per the aforementioned action plan would in fact lead to the generation of higher solid waste in the form of sludge as well as higher air pollution in the form

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f stack emissions. It would be therefore, actually more injurious to the mother Earth and also increase carbon footprint impacting the quality of breathable air.

We are given to understand that BBNIA (Baddi, Barotiwala, Nalagarh Industries Association) has already submitted a representation to Central Pollution Control Board (CPCB) in this regard with a request to review the norm of FDS levels outcome of which is awaited. A copy of the said representation is attached for your kind reference.

It is therefore, highly desirable that regulators may have a re-look at the policy and incorporate a measure of flexibility in dealing with the FDS standards.

Thanking you

Vardhman Textiles Limited

For Vardhman Textiles Limited

For. Vardhman Textiles Ltd

Authorized Signatory

IMJS Sidhu
President &
Director Incharge

Authorised Signatory

Enclosed : 1. Copies (12 pages) of River Sutlej FDS & DO data by CPCB
2. Copy of BBNIA representation to CPCB dated 07.01.2020

CC:- 1.Sr.Env.Engineer ,HPS PCB,Baddi

2. CEO, Baddi Infrastructure,BTTI Center,EPIP,Jharmajri,Baddi

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BADDI INFRASTRUCTURE

CIN: U45209HP2010NPL031349, GSTIN : 02AAECB3644E1Z9
Baddi Technical Training Institute (BTTI) Complex, EPIP Phase - 1, Jharmajri,
Tehsil Baddi, P.O. Barotiwala, Distt. Solan (H.P.) 174103 Ph.: 01795-271105, 271106
Email: baddiinfra@yahoo.in, web site: baddiinfra.org.in

No. BI/HPSPCB-III/2020-322-25

Date:- 09.03.2020

The Member Secretary,
HPSPCB, Shimla.

Subject:- Action Plan for efficient operation of CETP Baddi.

Sir,

Please refer to our Letter No. BI/HPSPCB-IV/2020-108-110 dated 02.01.2020, addressed to The Secretary (Env. S&T)-cum-Chairman, HPSPCB, Shimla with a copy to ACS Industries and your good self giving details of earlier status of CETP and submitting Action Plan for further improvement in efficient operation of CETP. Copy attached for your kind perusal and ready reference –**Annexure-I.**

Further to this, a meeting was held under your Chairmanship on 1st February 2020, to discuss the Action Plan submitted by us in view of Hon'ble NGT order in OA No. 801/2018 titled Jasmeet Singh V/s State of HP others dated 14.01.2020 and the following Directions were issued:-

1. Baddi Infrastructure shall submit detailed action plan cum proposal along with timeline for improvement of CETP immediately to HPSPCB and Industry Department.
2. M/s Winsome Textile and M/s Vardhman Textile Ltd Baddi shall submit detailed action plan along with timeline and proposed technological detail for up-gradation of existing ETP's for treatment of Category-IV effluent along with existing action taken report.
3. The Industry Department shall take up the matter of action plan cum proposal of Baddi Infrastructure for improvement of CETP Baddi, immediately for its necessary funding in view of Hon'ble NGT Directions dated 14.01.2020.

We hereby submit the implementation status of our Acton Plan for your reference and submission to Hon'ble NGT in above referred case.

Implementation Status

SNo.	Action Plan	Implementation Status/Plan	Remarks
1	Separation of Category-II and Category-III streams	The Action Plan stands implemented w.e.f 24.12.2019	
2	Separation of Category-IV from Category-I stream	The pipeline has been partially de-chocked as complete de-chocking is not possible at certain stretch of 390 mtr. New bypass line is being laid for which work is in progress and to be completed by 20.03.2020. Since the stage-II of the project which was specifically for Category-IV stream is not implemented, hence a pipeline from Category-IV tank to Category-I tank has already been laid in order to further treat Category-IV effluent for COD/BOD/colour reduction. The Action Plan for treating TDS/FDS is separately submitted here under.	
3	Treatment of Sulphide	We identified industries discharging high Sulphide and suggested to take action at their level to reduce the Sulphide vide letter dated 13.09.2019. The action plan therefore stands implemented from September 2019. This is also evident from Test Results of effluent samples done by CETP Lab, Third Party engaged by Baddi Infrastructure,	The bad odour complaint of villagers around CETP is over after implementation of this action plan.

		done at our Member's Lab and also by HP Pollution Control Board lab.	
4	Improvement of BOD Parameter The Test Results of BOD by HPSPCB Lab were marginally high which might have been due to methodology of testing	The following action plan was designed to reduce BOD: 1. Reduction of Sulphide will increase bacterial activity in the effluent resulting into reduction in both COD and BOD. The action plan already implemented since September 2019. 2. Increasing the frequency of removal of biological sludge also implemented w.e.f October 2019.	This implementation is also evident from the Test results of various labs in recent months we have reduction of BOD below prescribed level.
5	Control of TDS/FDS and Chloride	Following action plans are prepared: 1. Two major units M/s Vardhman and M/s Winsome discharging about 3MLD of Category-IV effluent which is significantly high in TDS/FDS will create facility at their end to bring the TDS/FDS level below 2100 mg/l and the detailed action plan submitted by them is enclosed at **Annexure-II & III**. The parties have given time line schedule for its implementation which is to be completed by 31/12/2021. 2. After the implementation by above referred parties the TDS/FDS level in any way will come down below prescribed limits due to mass balancing at CETP despite high TDS/FDS effluent of approximately 2.0 MLD by MSME/pharmaceutical Member Industries. However to	

		avoid any unfavourable situation and to support MSME/pharmaceutical unit it is proposed to install RO+MEE+ATFD at CETP of 2.0 MLD capacity by Baddi Infrastructure. The proposal will be implemented in a time period of twelve to eighteen months.	
6	Aesthetic Parameter of Colour	The following Action Plan is prepared: 1. Treatment of Colour in Category-IV to be done at unit level as per action plan submitted by them at point no.5. 2. We are working on fixing 500 Co Pt at discharge norm for colour and detailed treatment scheme is being finalized with member industries and to be implemented by 30/09/2020.	
7	Aesthetic Parameter of Odour	1. Already improved significantly after control of Sulphide in the inlet. 2. The odour from MSW disposal plant adjoining to CETP which is being implemented by BBNDA also need to be addressed to improve the overall issue of odour.	
8	To change the final disposal point of treated effluent	The pipeline of approximately 2.6Km to be laid in order to meet this requirement. The order for preparing DPR already has been issued and it is expected by 31/03/2020. The final laying of pipeline is expected to be completed by 31/03/2021.	
9	Connectivity of	The STP is already connected	

	STP	however the volume received is 70 KLD and expected to increase in near future however the responsibility is of MC Baddi.	
10	Connectivity of Industry	The following action plan is prepared: 1. HPSPCB to follow GoHP Notification No.:ind-A(E)1-8/2008-1 dated 27/10/2010 to make it mandatory for all the industrial units to discharge their effluent to CETP and not allow any alternative use which is grossly misused. **Annexure-IV** The responsibility of this action plan lies with HPSPCB. 2. Reduction of original consent quantity should be allowed after Water Audit from MoEF approved auditor in order to ensure transparency. The responsibility of this action plan also lies with HPSPCB. 3. Some of the members do not adhere to the payment schedules as per tripartite agreement among industry, operator and Baddi Infrastructure and the later on compelling to disconnect the connectivity to CETP after following the SOP. Such units should not be allowed to alternate use/discharge of effluent except zero discharge otherwise this is again grossly misused. The implementation of this action plan is joint responsibility of Baddi Infrastructure to the extent of informing HPSPCB of disconnection and the second part	

		of withdrawing their consent lies with HPSPCB.	
11	Funding Support	Since the project was implemented under 90:10 scheme hence we have submitted preliminary project report to Department of Industries GoHP for funding support of Rs. 2648.21Lacs copy enclosed. **Annexure-V**	

Sir, it is requested that the above Action Plan for the efficient operation of the CETP Baddi, may please be submitted to the Hon'ble NGT, with the recommendation to permit the requested time period for its successful implementation.

Thanking you

Yours faithfully
For Baddi Infrastructure,

Vijay K. Arora
Director & CEO

Encl: I to V

Cc: 1. The ACS Industries GoHP, Shimla (H.P.)
2. The Secretary (Env. S&T)-cum-Chairman, HPSPCB, Shimla (H.P.)
3. The Director of Industries, Bemloi, Shimla (H.P.)

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Minutes of Meeting held on 18-03-2020 under Chairmanship of Member Secretary, HP State Pollution Control Board to review the action taken in compliance to Hon'ble NGT's order dated 14-1-2020.

A meeting was held on 18.03.2020 in the office of Member Secretary, HP State Pollution Control Board to review the action taken in compliance to Hon'ble NGT's order dated 14-1-2020 passed in OA No. 801/2018.

The Representatives of Baddi Infrastructure, B.B.N. Industries Association, Baddi, M/s Vardhman Textile Ltd and M/s Winsome Textile Industries Ltd. attended the meeting. The list of participants is annexed as Annexure-1

At the outset the Member Secretary, HP State Pollution Control Board welcomed all the stakeholders and participants of the meeting and briefed about the purpose of meeting. The order dated 14-1-2020 and minutes of earlier meeting held on 1-2-2020 was also discussed. M/s Baddi Infrastructure, M/s Vardhman Textile Ltd and M/s Winsome Textile Industries Ltd. briefed their action plans already submitted to HPSPCB alongwith with time line and proposed technological detail for upgradation of existing ETP's for treatment of category IV effluent.

The representative of the M/s Vardhman Textile Ltd and M/s Winsome Textile Industries Ltd. informed that action plan has been prepared and submitted. The work related to existing ETPs functioning has already started. The time line of implementation of action plan is 31st October 2021.

The representative of the M/s Baddi Infrastructure informed that as per directions of Hon'ble NGT the action plan for improvement of CETP, Baddi has been prepared and submitted.

After detail deliberation and discussion, on the above submitted action plans, following decisions were taken:-

1. M/s Vardhman Textile Ltd and M/s Winsome Textile Industries Ltd. shall revise time lines and submit revised Action Plan within 3 days.
2. M/s Baddi Infrastructure shall also submit revised action plan within 3 days.
3. M/s Vardhman Textile Ltd and M/s Winsome Textile Industries Ltd. shall continue to carry upgradation/addition in Effluent Treatment Plants.

The meeting ended with a vote of thanks to and from the chair.

-Approved by-
Aditya Negi, (IAS)
Member Secretary
HPSPCB-Shimla

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No. PCB/O.A. No. 801/208- 5177-82 Dated: 20.3.2020

Copy forwarded to the following for information and necessary compliance as per Hon'ble NGT Order:

1. The Director (Industries), Govt of HP Bemloe Shimla-1
2. The Senior Environmental Engineer, (HQ), HPSPCB Shimla.
3. The Senior Environmental Engineer, HPSPCB, Regional Office, Baddi.
4. The President, B.B.N. Industries Association, Jharmajri Baddi, District Solan HP.
5. The CEO/MD M/s Vardhman Textile Ltd Sai Road, Baddi District Solan HP.
6. The CEO/MD M/s Winsom Textile Industries Ltd, Plot No.-1 Industrial Area Baddi, District Solan HP.

O/C

Senior Law Officer
HPSPCB-Shimla

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winsome
Textile Industries Ltd.
SCO # 191-192, Sector 34-A
Chandigarh - 160 022 INDIA
Tel. : +91-172-2603966, 4613000
Fax : +91 - 172 - 4646760
CIN : L17115HP1980PLC005647
E-mail : wtil@winsometextile.com
Website : www.winsometextile.com

WTIL/ETP/19-20/868
Date :-27-03-2020

To

Member Secretary,
H.P. State Pollution Control Board,
Him Parivesh, Phase-III,
New Shimla-171009

Sub :- Permission to treat Category IV effluent in Plant

Dear Sir,

In reference to your office letter no-PCB/1435/M/S Winsome Textiles Ltd./2020-3958-59 Dated 05-03-2020 and during detailed presentation given by us on dated 18th March 2020 in the office of Hon'ble Chairman PCB, we wish to submit revised schedule of treatment scheme for Cat IV effluent in our plant along with technolgy to be used with time line.

Cat- IV Effluent treatement scheme is devided in three phases.

Phase-I :-In this scheme, effluent pass through Physio chemical cum biological treatment upto secondary clarifier. Revamping of existing ETP is completed and this scheme was fully operational on 29th Feb.2020 and achieving results well within new prescribed pre treatment parameters vide notification Govt.of H.P. No.STE-F(2)-1/2017 dated 26-12-2019 except FDS.

Phase-II :-In this scheme, total new infrastructure has to be made including Civil and mechanical work .Effluent will pass through tertiary tretament and allied scheme . Treated water through this scheme will be fed to phase-III i,e TDS reduction.

Phase-III :-Here TDS reduction will be done. For this scheme, we have already appointed a consultant to advise us on the suitable technology. With referance to the discussions held with our consultant and various vendors, approximately 15 months i,e. 3 months for testing of effluent and 12 months thereafter are required to implement the scheme to achieve FDS level 2100 mg/ltr or below in CAT IV effluent and details given in Table below. It includes, as learned authentically from various vendors and our consultant, ordering of equipment, trial runs, its commissioning and successful running. For this scheme completely new infrastructure has to be made and effluent should pass through Ultra filteration, Micro filteration, Nano filteration and RO system . Treated water @75% to be used in the process, rest may be discharged to CETP as per parameters given in Govt.Of H.P. Notification.

Regd. Office & Works : 1, Industrial Area, Baddi - 173205, Distt. Solan (H.P.) Phones : +91 - 1795 - 244045, 244090, 244290 Fax : +91-1795 - 244287
Ludhiana : 1912, 1st Floor, Kuldeep Nagar, Near Basti Jodhewal Chowk, Adj. Hero Motors Workshop, Ludhiana - 141007, Ph. : +91-161 - 2709479 e-mail : mktgldh@winsometextile.com
Gurgaon : 1003, 10th Floor, Welldone Tech Park, Sector 48, Sohna Road, Gurgaon - 122002 Ph. : +91- 9810410751, +91- 9310664545, 0124 - 4268026, 4268075 e-mail : mktgdel@winsometextile.com
Tirupur : Associated Industries, 8/269 B&C AVP Layout, R.A.Complex, Gandhi Nagar, Tirupur - 641603 Ph. : +91-421 - 2476394, 2474364 Fax : +91-421 - 2470028 e-mail : deokiran@vsnl.com

IS / ISO 9001 QMS
IS / ISO 14001 EMS
IS 18001 OHSMS

Table

Sr No	Description of Jobs to be done	No of Months(Dates)
1	Revamping & commissioing of Existing ETP	Operational
2	Selection of Scheme, Tendering & Order finalization	4 (01-04-2020 to 31-07-2020)
3	Finalization of Drawing	2 (01-08-2020 to 30-09-2020)
4	Civil work & Supply of equipment	4 (01-10-2020 to 31-01-2021)
5	Erection of equipment	2(01-02-2021 to 31-03-2021)
6	Trial run and Commissioing of plant	3 (01-04-2021 to 30-06-2021)
7	Total	15 months

Therefore, Scheme will be fully operational on or before 30th June 2021. However we will make all endeavours to shorten this time line to complete by **31st March 2021.**

Thanking you.

Your's sincerely,
For Winsome Textile Industries Ltd.

(Anil Sharma)
Executive Director

CC : 1. The Chairman cum Additional Chief Secretary (Environment)
HPS. PCB, Shimla
2. Sr.Environmental Engineer ,HPS PCB, Baddi

Action Plan for Treatment of Category-4 Effluent at Vardhman

Presented to : Chairman, HPSPCB

Presented by : Vardhman Textiles Limited, Baddi

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Production Process & Effluent Generation

Unit	Process	Type of Effluent Generated
Auro Dyeing	Fiber & Yarn Dyeing	Cat-1 (Low FDS) Cat-4 (High FDS)
Auro Textiles-1	Fabric Processing & Finishing (Piece Dyed)	
Auro Textiles-2	Fabric Printing Fabric Processing & Finishing (Yarn Dyed)	

Effluents discharged

Category-1

Parameter	CETP Inlet Norm	Compliance Status
COD	1000 mg/l	Discharged to CETP (Pre-treated) Meeting CETP inlet norms
BOD	350 mg/l	
TSS	250 mg/l	
FDS	2100 mg/l	

Category-4

Parameter	CETP Inlet Norm	Compliance Status
COD	1000 mg/l	Discharged to CETP (Treated) Meeting CETP inlet norms except FDS
BOD	350 mg/l	
TSS	250 mg/l	
FDS	2100 mg/l	

Developments up to 26th December 2019

- Operated in-house Effluent Treatment Plants (World class technology) meeting all discharge norms
- H.P. Govt. notification dated 27th October 2010 making it mandatory to send effluent to CETP
- In-House ETP operations / Treatment facilities stopped
- Started sending both Cat-1 & Cat-4 effluent to CETP effective October 2015 upon commissioning of CETP
- No norm for FDS existed at the time of commissioning of CETP; introduced by Govt. later in 2016
- FDS control system in CETP was planned in phase-II
- H.P. Government Notification dated 17th March, 2018 revised CETP inlet norms of pH, TSS, Oil and Grease levels - Pre-treatment of effluent started.

Developments Post 26th December 2019

- HP Govt. vide notification dated 26th Dec'2019 revised CETP inlet norms. Scope widened- 11 parameters notified including FDS.
- Changes notified without involving stakeholders & without giving adequate time to the impacted units to realign their processes & pre-treatment facilities.
- Necessitated major revival of in-house Effluent Treatment facility to meet additional & highly stringent parameters.
- In the absence of FDS control system at CETP, left with no option but to take up a project to treat Cat-4 effluent in-house.
- Hence permission sought to treat Cat-4 effluent in-house- granted vide letter dated 28th Jan, 2020.

Project Implementation Steps

Step 1	Major revamping & revival of existing Effluent Treatment facility
Step 2	Discussion with technology vendors and Study of Effluent attributes for control of FDS
Step 3	Finalization of Technology and Treatment Scheme
Step 4	Floating of Tenders, Techno-commercial discussions, Finalization of Vendor, Placement of Order Execution of Civil Work
Step 5	Equipment Erection, System Commissioning System stabilization

Step 1 – Major Revamping & revival of existing Effluent treatment facility

- Diversion & Collection of Cat-4 stream of all the three Units into a common Homogenization tank
- Revamping of Physio-Chemical Treatment System
- Revamping of Biological Treatment system

1. Removal of sludge
2. Replacement of diffusers
3. Addition & overhauling of Air blowers, Flow Makers, Decanters, Pumps etc.
4. Development of Biomass

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Step 1 – Major Revamping & revival of existing Effluent treatment facility (Contd..)

- Effluent Treatment Facility under stabilization
- Invested Amount- Approx. 3 Cr
- Parameters achieved-

pH- 7.0-8.5, BOD- 28-35 mg/l, COD- 230-280 mg/l, TSS- 40-80 mg/l
(BOD removal efficiency around 95%, COD removal efficiency around 90%)

Target - 31st March 2020

Homogenization Tank

Before Revamping

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Homogenization Tank

After revamping

Biological Tank

Before revamping

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Biological Tank

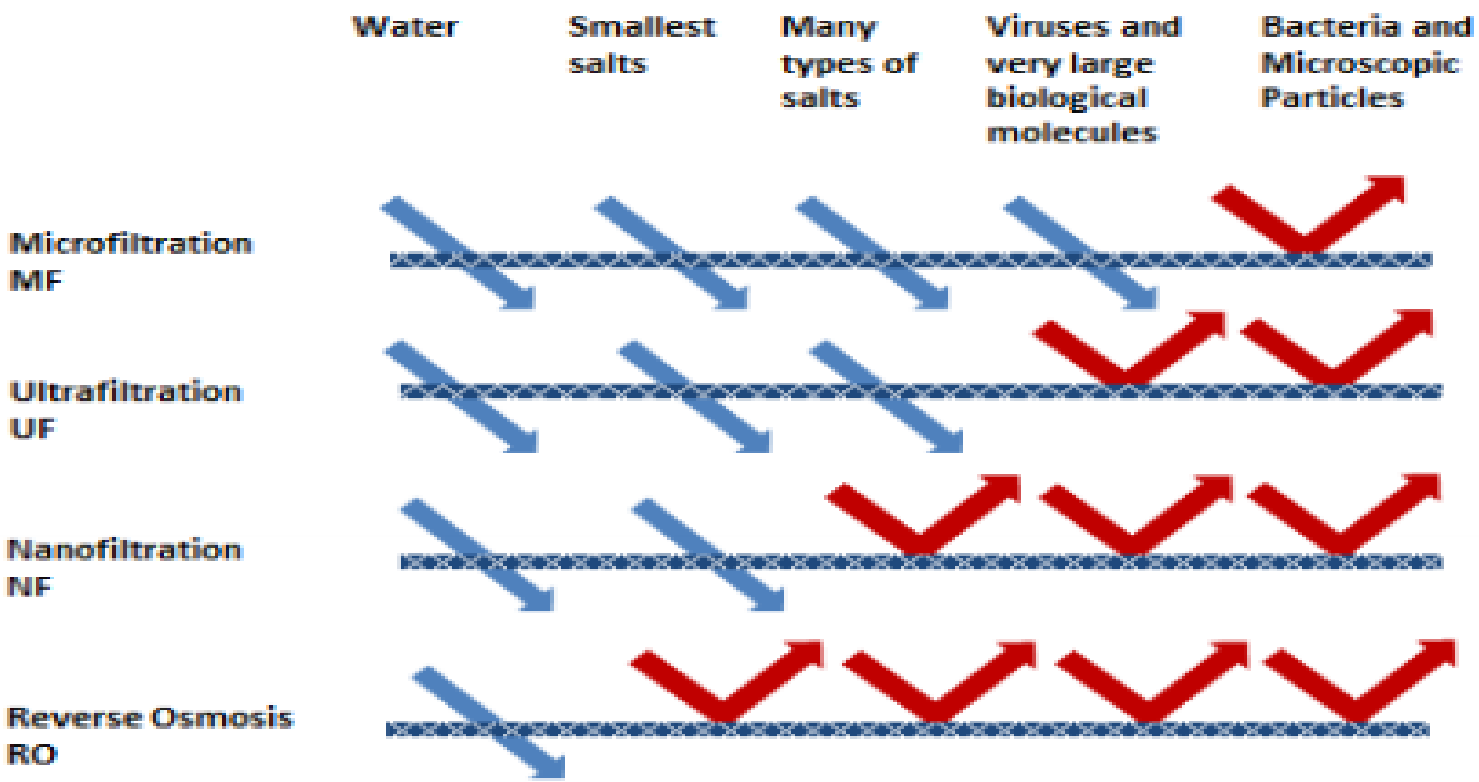
After revamping

Step-2: Discussion with technology Vendors and Study of Effluent attributes for control of FDS

- Technical discussions initiated with three Vendors
  - **Hydrotech, Italy – Spiral Wound Membrane technology**
  - **Rochem Mumbai – Plate & Tube – Disc Membrane technology**
  - **ATE, Mumbai - Spiral Wound Membrane technology**
- Combined Cat-4 effluent of three units - resultant complexity
- Requires thorough testing, trials & understanding of treatability attributes
- Highly Critical phase- involves Changes in treatment process to achieve infeed effluent norms for FDS control system
- Permutation-Combination of Ultra-Filtration, Nano Filtration, R.O , Multiple Effect Evaporator (MEE), Agitated thin film Dryer (ATFD) to be studied for effective treatment

Target - 30th June 2020

Selection of Appropriate Combination of Filtration Technology



Critical for effective treatment and recovery

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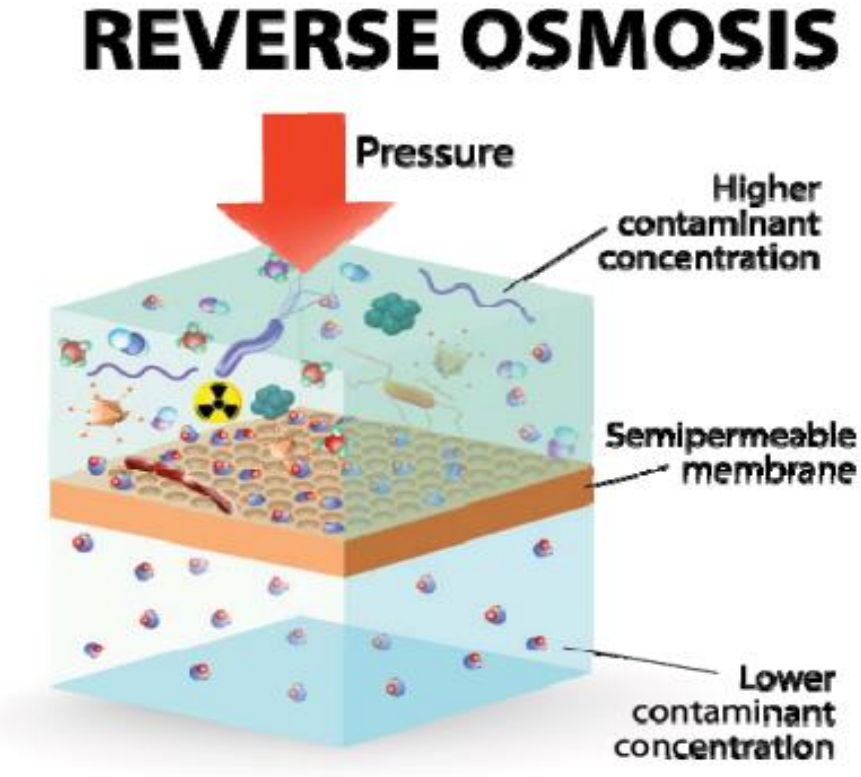
Reverse Osmosis

Reverse osmosis uses pressure to concentrate salts and dissolved molecules on the "concentrate" side of the membrane, and to push fresh water though to the "permeate" side of the RO membrane



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Step-3: Finalization of Technology and Treatment Scheme

- On boarding of Environmental Consultant
- Treatability studies covering aerobic, anaerobic, physio-chemical and membrane filtration
- Series of Pilot plant trials- analysis of inlet-outlet parameters
- Final decision on the technology and treatment protocol
- Financial closure for the project

Target – 15th July2020

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Step -4: Floating of Tenders, Techno-commercial discussions, Finalization of Vendor, Placement of Order

ACTIVITY	DESCRIPTION	TARGET
Floating of tenders	BOQ finalization , Equipment specifications, Vendors shortlisting, RFQ	31st Jul 2020
Order Placement	Bids evaluation, Technical clarifications, commercial negotiations	31st Aug 2020
Auxiliary Preparation	BOQ, RFQ, Civil & Mechanical contractors finalization	Sep-Oct 2020
Drawings Submission	Final Civil & Structural drawings	30th Sep 2020
Execution of Civil Work	Construction activity at site	October -February 2021
Equipment Delivery	Equipment inspection at Vendor's works, Dispatch advice, Custom clearances	Feb- March 2021

Step 5: Equipment Erection, System Commissioning

- Erection of equipments, trial runs and commissioning of FDS control system - would require 3 months post equipment delivery by Vendors
- Target Commissioning- **15st May'2021**.
- System **stabilization expected to take** two to three months post commissioning – Target- **3oth June 2021**

Estimated Project Cost- Rs. 40-45 Cr

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Summary of Action Plan

Step	Activity Description	Target Date
1	Major Revamping & revival of existing Effluent Treatment Facility	31.03.20
2	Discussion with technology vendors and Study of Effluent attributes for control of FDS	30.06.20
3	Finalization of Technology and treatment Scheme	15.07.20
4	Floating of Tenders, Techno-commercial discussions, Finalization of Vendor, Placement of Order	30.08.20
	Execution of Civil work	Sep – Feb 21
	Equipment Delivery	Feb-March 21
5	Equipment Erection, Trial Runs, System Commissioning	15.05.21
	System Stabilization	30.06.21

ACTIVITY WISE PROJECT PLAN

Sr	Activity	Timeline
		Dec-19 · Jan-20 · Feb-20 · Mar-20 · Apr-20 · May-20 · Jun-20 · Jul-20 · Aug-20 · Sep-20 · Oct-20 · Nov-20 · Dec-20 · Jan-21 · Feb-21 · Mar-21 · Apr-21 · May-21 · Jun-21 · Jul-21 · Aug-21 · Sep-21 · Oct-21
1	Revamping & Revival of existing effluent treatment facility	
2	Discussion with technology vendors	
3	Study of Effluent attributes for control of FDS	
4	Finalization of Treatment Scheme	
5	Preparation & Floating of Tender Documents	
6	Submission of Techno Commercial offer by Vendors	
7	Placement of Purchase Order	
8	Civil and Engineering Drawings Submission	
9	Finalization of Civil, Mechanical & Electrical Contractors	
10	Execution of Civil Works	
11	Delivery of Material at Site	
12	Equipment Erection	
13	System Commissioning	

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A Request for Consideration..

Notwithstanding the Project Plan

An important aspect of FDS deserving Attention..

No Harmful Impact of FDS on river water

- The primary constituent of FDS in textile effluent is Common Salt (NaCl)
- Does not contain any toxic substance detrimental to human, livestock or aquatic life
- Study reveals no impact of FDS on river water- both Sarsa and Sutlej

Parameter	Sarsa River Upstream	CETP Outlet	Sarsa River Downstream	Sarsa River Before Mixing Sutlej	Sutlej River (After Mixing Sarsa)
FDS (mg/l)	350	2374	492	366	168

Sutlej Water Quality Data

Sr.	Point of Sample Collection	Monthly FDS Data- 2019												
		(Jan 19)	(Feb 19)	(Mar 19)	(Apr 19)	(May 19)	(June 19)	(July 19)	(Aug 19)	(Sep 19)	(Oct 19)	(Nov 19)	(Dec 19)	Average 2019
1	River satluj at U/s Nangal	124	120	134	132	109	98	118	105	112	102	104	129	116
2	River satluj at D/s NFL	146	142	148	161	122	101	125	110	115	118	116	153	130
3	River satluj at 100m D/s PACL	140	146	138	162	130	103	133	114	114	121	167	220	141
4	River satluj at 100m D/s Nangal	129	132	154	181	140	105	136	114	110	118	142	142	134
5	River satluj at Kiratpur Sahib	151	160	209	150	128	120	143	111	302	108	194	120	158
6	**Ropar Head- Works**	**145**	**149**	**192**	**162**	**152**	**132**	**154**	**121**	**123**	**116**	**112**	**164**	**144**
7	River satluj D/s of Rishab Paper Mills	235	208	221	176	159	142	168	129	136	120	123	157	165
8	D/s Hussainiwala Last point of Sutlej	117	127	142	172	142	120	134	111	120	112	125	145	132

Monitored by CPCB under National Water Monitoring Program.

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Our Submissions for Consideration

- No specific norm for FDS in the USA and European countries
- The measurement of aquatic toxicity index of the recipient river is the determinant factor- whether there is any harmful impact
- Treatment of FDS will in fact lead to the generation of higher solid waste in the form of sludge as well as higher air pollution in the form of stack emissions.
- 5 MLD treated sewage (STP already functional & awaiting connectivity) shall reduce FDS load substantially.
- The subject of review of FDS norm is already under consideration of CPCB

Thank You