

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

OA No. 1137 of 2024

IN THE MATTER OF:

Neelam Rani

.....Applicant

Versus

State of Punjab

.....Respondent

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JALANDHAR

COUNSELS FOR THE RESPONDENT NO.4

DATED: 06/03/25



(Adv. Ajay Sharma/Adv. Sankalp Sagar)

ADVOCATES

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For BHARTI SCIENTIFIC DYERS



Proprietor

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

OA No. 1137 of 2024

IN THE MATTER OF :

Neelam Rani

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Additional reply by way of affidavit regarding compliance of Sh. Tilak Raj, Proprietor M/s Bharti Scientific Dyers, Village Meharban, Rahon Road, Ludhiana -Respondent No 4

I, the above named deponent do hereby solemnly affirm and declare as under :-

Respectfully Showeth :-

1. That the deponent is a proprietor of M/s Bharti Scientific Dyers having an Industrial Unit in Village Meharban, Rahon Road, Ludhiana and as such is conversant with the facts of the case and is competent to file the present reply by way of an affidavit.
2. That the applicant has filed the complaint/application with this Hon'ble Tribunal against the water & air pollution caused by the industrial unit of the deponent. The aforesaid complaint/application is treated as the present OA No. 1137 of 2024.
3. With respect to the order dated 17.02.2025, whereby the Hon'ble Tribunal directed respondent no. 4 to file an additional reply, the relevant portion of the order is as follows:-

1. *Learned Counsel for respondent no.4 seeks time to file additional reply/response.*
2. *Additional reply/response be filed by respondent no. 4 at least three days before the next date of hearing fixed.*
3. *List on 20.03.2025 for further consideration.*



For BHARTI SCIENTIFIC DYERS
Tilak Raj
 Proprietor

Accordingly, the present reply is being submitted in compliance with the Hon'ble Tribunal's order dated 17.02.2025.

It is pertinent to mention that, as per the earlier direction of this Hon'ble Tribunal vide order dated 10.02.2025, respondent no. 4 was required to file its reply, specifically detailing the measures taken to remedy past violations pointed out by the Punjab Pollution Control Board (PPCB) and to ensure compliance with environmental norms. In adherence to the said direction, respondent no. 4 duly filed its reply on 19.02.2025, within the stipulated two-week period (well before 24.02.2025).

4. The deponent at the outset most respectfully submits that the action taken by the PPCB as well as the Joint Committee are absolutely unlawful, unjustified and against the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (here-in-after referred to be as "water act"). The said action is even against the orders of the Tribunal dated 18.11.2024. The deponent reserves the right to challenge the aforesaid orders passed by the PPCB dated 17.01.2025 (**Annexure E-G, Page No. 19-23**) under appeal u/s 33-B of the Act, 1974.

5. The deficits pointed out by PPCB during the hearing done on 11.04.2023 have been resolved during the earlier closure order dated 16.08.2024 as per reply by respondent no. 3 dated 14.02.2025 (**Annexure R3/I, Page No. 118-120**) which are reproduced for the kind reference of this Hon'ble Court

- a. The industry shall upgrade the Air Pollution Control Device (APCD) System.
- b. Only authorised boiler fuel to be used to ensure no black smoke is emitted.
- c. No stagnation should occur in plantation area.
- d. Sludge drying capacity to be increased.

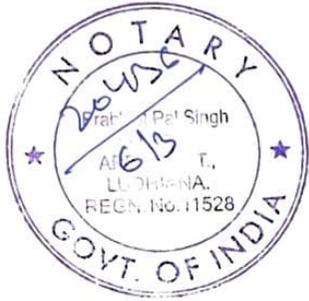


For BHARTI SCIENTIFIC DYERS

Ishtu Roy

Proprietor

- e. To maintain discharge standards as per the Environment Protection Act, 1986.
6. The compliances were reportedly done in lieu of the deficit(s) as pointed out above by PPCB and fresh consent was issued on 07.11.2024 valid upto 06.05.2025 as per reply by respondent no. 3 dated 14.02.2025 (**Annexure R3/K, Page No. 122-128**) with reduced trade effluent discharge @120 KL/day instead of @200 KL/day (previously).
7. It is also pertinent to mention that on earlier occasion water consent was issued for the period 25.07.2021 to 30.06.2025 (**Annexure R3/F, Page No. 107-108**) and air consent for the period 10.02.2021 to 30.06.2025 (**Annexure R3/F, Page No. 109-111**) as per reply by respondent no. 3 dated 14.02.2025.
8. During the visit of Joint Committee:
- a. No air violations had been pointed out (as reported by respondent no.4 vide reply dated 19.02.2025 which is again reproduced for kind reference of this court.



Parameter	Observation
Stack Height	>100 ft
APCD	Working and in place
Black Smoke	Not detected and authorised boiler fuel being used

For BHARTI SCIENTIFIC DYERS

Isheer Ray

Proprietor

2. The analysis report of the air emission sample collected from the stack of Air Pollution Control Device (APCD) installed with the Boiler furnace of capacity 07 TPH of the industry is tabulated below:

Sr. No	Point of Sample Collection	Parameters	Results	Prescribed Standard
1	Port hole on stack after APCD (Boiler @ 07 TPH + Water Ball @ 02 TPH)	Particulate Matters (mg/Nm ³) at 12% CO ₂	486 mg/Nm ³	500 mg/Nm ³

The sample was found within the permissible limits.

b. As regards water act, compliances as reported during the visit of Joint Committee on 12.12.2024 as reported in short reply of respondent no. 2 dated 21.01.2025 (Annexure R, Page No. 63) :

4. The industry has installed Effluent Treatment Plant (ETP) of adequate capacity to handle the waste water generation of 120 KLD.

5. The industry has developed adequate land under plantation as per Karal Technology for disposal of its treated waste water onto land for plantation.

6. No bye-pass arrangement for disposal of untreated trade effluent was observed there in the Effluent Treatment Plant of the industry.

9. The Joint Committee also analysed the ETP parameters on 12.12.2024 as reported in short reply of respondent no. 2 dated 21.01.2025 (Annexure D, Page No.72) which shows that out of 11 parameters only 2 parameters BOD and COD were marginally high, which are easily controllable as the ETP as of adequate capacity of 360 KLD whereas the effluent to be treated is only 120 KLD as per the water consent issued by PPCB. The plant adequacy report is also being annexed as per Annexure R-4/1 .



For BHARTI SCIENTIFIC DYERS

P. Singh
Proprietor

10. As reported in short reply of respondent no. 2 dated 21.01.2025 (Annexure R, Page No. 63) the Joint Committee had verified the compliances as to:

1. The industry was having valid permission from the Punjab Pollution Control Board under the Water (Prevention & Control of Pollution Act, 1974 and Air, (Prevention and Control of Pollution) Act, 1981 for the period upto 06.05.2025

2. The industry has installed proper Air Pollution Control device (APCD) with stack of adequate height of 100 feet above ground level with its boiler furnace.

3. The industry was not emitting black smoke from its stack during the visit and has achieved the emission standards as prescribed by the MOEF/CPCB/PPCB. The concentration of Particulate Matters (PM) is found to be 486 mg/Nm³ which is with the prescribed limits of 500 mg/Nm³ hence the industry has complied with the provisions of the Air (Prevention & Control of Pollution) Act, 1981,

4. The industry has installed Effluent Treatment Plant (ETP) of adequate capacity to handle the waste water generation of 120 KLD.

5. The industry has developed adequate land under plantation as per Karal Technology for disposal of its treated waste water onto land for plantation.

6. No bye-pass arrangement for disposal of untreated trade effluent was observed there in the Effluent Treatment Plant of the industry.

11. The proactive steps had been taken as reported in reply by respondent no. 4 dated 19.02.2025 by appointing Eros Consultants (Annexure A, Page No. 162).

12. To further enhance the performance of ETP of 360 KLD capacity M/S Eros Consultants were further engaged on 05.03.2025 to suggest ways and means to optimise the performance of ETP. The steps taken are being annexed (Annexure R4/2) and enunciated as below:



For BHARTI SCIENTIFIC DYERS

Ishtu Singh

Proprietor

- a. Even additional Oxygenation Facility had been provided in the collection tank.
- b. The Media of the Activated Carbon Filter has been replaced at cost of Rs 62,304 (Annexure R4/3).
- c. The Activated Carbon Filters (ACF) have been placed serially as pointed out by M/S Eros consultants.
- d. Even chemicals mixing arrangement have been done for polyelectrolyte as per suggestion of M/S Eros consultants.
- e. The Standard Operating Procedure (SOP) along with the visit report of engineer of M/S Eros Consultants dated 04.03.2025 is being annexed as Annexure R4/4.

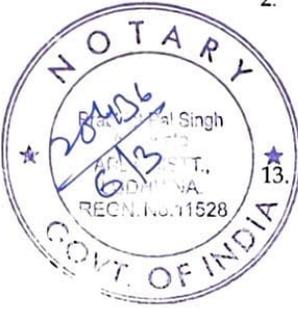
Legal Points:

1. **Violation of Natural Justice:** No Natural Law Principles of justice had been followed by PPCB as no show cause notice u/s 33-A had been given to the industry and no hearing has been done by PPCB as admitted by the latter in closure notice issued dated 17.01.2025 as per reply by respondent no. 3 dated 14.02.2025 (Annexure R3/C, Page No. 98-99).

Hence, principle of Audi Alteram Partem stands grossly violated.

2. **Exceeded the jurisdiction:** This Hon'ble court only mandated the Joint Committee to file status report whereas the Joint Committee exceeded the jurisdiction and invited contempt of supervisory jurisdiction of this Hon'ble court.

Closure without grave Environmental Violation: In BOD and COD as pointed out by PPCB was only marginally high. COD was 279 mg/l instead of 250 mg/l and BOD was 55 mg/l instead of 30 mg/l. The regulator (PPCB) could have suggested the corrective steps instead of closing the unit vide its order dated 17.01.2025 as per reply by respondent no. 3 dated 14.02.2025 (Annexure R3/C, Page No. 98-99). It is submitted that due to the aforesaid actions of revocation of the consent to operate as well as stopping the operation of the industry has prejudicially affected the deponent and the unit is facing financial losses as well as loss of good will



For BHARTI SCIENTIFIC DYERS

Islex Raj

Proprietor

every day. Apart from this the workers/ employees of the industrial unit are not being paid because of the aforesaid actions of stopping the operation of industry.

3. **Unilateral Decision:** This Hon'ble Tribunal had already taken cognizance of the matter and PPCB had no authority to bypass the Hon'ble Tribunal by issuing a closure order **unilaterally**.
4. **No Sampling Procedure:** Even sampling procedure under water act as per Section 21 has not been followed as suggested vide Section 21 in short reply by respondent no. 4 dated 06.02.2025 (**Para. 9, Page No. 30-32**).
 - a. Result of analysis of sample not admissible in evidence in any legal proceeding unless the provisions of sub-section(s) (3),(4),(5) of Section 21 are complied with as per water act.
 - b. No two part sampling done as per Section 21 sub-section (3)(b).
 - c. No notice served as per Section 21 sub-section (3)(a) as per water act.
 - d. As per Section 21 sub-section (3) composite sample was to be taken as there remains variation in trade effluent as per different periodic intervals as per production activities.
 - e. As per Section 21 sub-section(4)(a) container of the water sample should have been sealed and signed by the person taking the sample which was not the case here.
 - f. The sample was collected when the backwash process was being done (9:15 am) as pointed out by the incumbent on 15.01.2025 to PPCB and had even requested to take a fresh sample but no cognizance for the same had been taken by PPCB as per reply by respondent no. 4 dated 06.02.2025 (**Annexure R4/1, Page No. 38 & 51-52**).



Case Law:

1. **Jagjevan Singh vs Punjab Pollution Control Board I.A No. 292/2022 in O.A No. 487/2022 on 06.04.2023, Law Finder Doc Id # 2236840**

The NGT's ruling in *Jagjevan Singh vs. Punjab Pollution Control Board* is relevant to the present case as it underscores that electricity

disconnection should not be arbitrary, especially when based on improper sampling. In O.A 1137/2024, PPCB disconnected the electricity connection without granting a hearing and relied on flawed sampling conducted during backwash, which does not accurately reflect normal operating conditions. Similarly, in *Jagjevan Singh*, the tribunal found that PPCB's noise assessment was inconsistent and conducted without proper standards for mixed-use areas. The ruling emphasizes the need for fair procedures, proper sampling methodologies, and due process before imposing punitive measures like electricity disconnection. The relevant part of the judgement is reproduced as below:

12. We are of the considered view that the matter requires due consideration regarding applicability of noise level standards and also the measures required to be taken for abating noise pollution and therefore, immediate recourse to issuance of order for closure of one of the units which are operating in the area may not be proper, as in such eventuality all other units have also to be scrutinized on the same prescribed standards of noise and closure orders have also to be issued in respect of all other units similarly placed. In the facts and circumstances of the case, it will be appropriate that no immediate recourse is made to issuance of order for closure of units in the area without due deliberation of the questions involved. Therefore, it will be just and proper that the closure and electricity disconnection orders issued in respect of the unit of project proponent is kept in abeyance till decisions of the questions involved in the present application. Accordingly, till further orders to the contrary closure and electricity disconnection orders issued in respect of the unit of the project proponent shall remain in abeyance..."

2. Haryana State Pollution Control Board vs Haryana Organics, Appeal No. 05/2013 on 27.05.2013, Law Finder Doc Id # 628953

The case of *Haryana SPCB vs. Haryana Organics* (2013) is highly relevant to O.A. 1137/2024, as it underscores the arbitrariness of regulatory actions taken without due process. In the case, HSPCB forfeited a bank guarantee without adhering to proper legal procedures or granting the affected party a fair hearing. The tribunal ruled that such actions were arbitrary, lacked legal



For BHARTI SCIENTIFIC DYERS
Israr Raj
 Proprietor

foundation, and violated principles of procedural fairness. Similarly, in O.A. 1137/2024, PPCB disconnected the electricity connection without providing a hearing, despite being directed to submit a status report to the NGT. Instead, PPCB overstepped its jurisdiction by ordering the closure of units based on improper sampling, making its actions legally untenable.

The relevant part of the judgement is reproduced as below:

25. For the sake of argument, we may assume that HSPCB had the power to give direction to forfeit Rs. 12.25 lacs out of Bank Guarantee amount of Rs. 50 lacs. Even so, such direction cannot be issued without following due procedure as contemplated under the Water (Prevention and Control of Pollution) Rules, 1975. Rule 34 requires State Board to serve concerned person with a copy of the proposed direction and to give an opportunity of hearing. Section 34 may be reproduced in order to understand the procedure that is required to be followed by State Board before execution of the proposed direction. "Section 34: Directions (1) Any direction issued under section 33-A shall be in writing. (2) ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ (3) The person, officer or authority to whom any direction is sought to be issued shall be served with a copy of the proposed direction and shall be given an opportunity of not less than fifteen days from the date of service of a notice to file with an officer designated in this behalf the objections, if any, to the issue of the proposed direction."

26. We find that HSPCB did not comply with the due procedure as envisaged in Rule 34 (3) of the Water Rules. For this reason too, the forfeiture of 25% of the Bank Guarantee furnished by M/s Haryana Organics was illegal and improper. We do not find any substantial internal contradiction between the observations of the Appellate Authority in paragraph (9) of the impugned order and the concluding paragraph thereof. We may state here that the Appellate Authority categorically held that forfeiture of Rs. 12.25 lacs was arbitrary and even demand of Bank Guarantee had no basis. The Appellate Authority held that demand for the Bank Guarantee was coercive, unjust and unreasonable. Still, however, the Appellate Authority made passing observation that the HSPCB may reconsider the matter in order to satisfy apprehension of M/s



For BHARTI SCIENTIFIC DYERS

Ishtar Ray

Proprietor

Haryana Organics about the basis and quantification of Bank Guarantee. However, it was further observed that if M/s Haryana Organics had any grievance about the forfeiture, it can again approach the Appellate Authority on that issue because imposition of the Bank Guarantee showed that the HSPBC had been very unkind to M/s Haryana Organics. The observations in paragraph (9) of the impugned order cannot be branded as final finding of the Appellate Authority, though, the observations are unhappily worded.

As the deponent's unit has been shut down and electricity connection has been disconnected on 21.01.2025 through the unilateral, arbitrary and unlawful action of PPCB; the deponent humbly requests to this Hon'ble Tribunal to kindly consider the effective steps taken towards compliance(s) to meet up the Environmental Norms. The deponent's unit may kindly be allowed to open so that the feasibility is not prejudicially affected further because of unlawful, unjust and arbitrary action of PPCB.

Prayer:-

In light of the facts and circumstances mentioned herein above, it is prayed that this Hon'ble Tribunal may be graciously pleased to take the present reply on record.

Therefore, as per the foregoing and submissions made in the present reply, it is most respectfully prayed:-

- (i) that the present complaint/OA be dismissed;
- (ii) the report of the Joint Committee regarding water sampling (trade effluent) and action taken thereof be totally disregarded and not considered as the same is absolutely unjustified, unlawful, arbitrary and against the provisions of the Water (Prevention and Control of Pollution) Act, 1974;
- (iii) the orders dated 17.01.2025 (**Annexure E-G, Page No. 19-23**) passed by the PPCB be set aside, and the respondent Punjab Pollution Control Board be directed to restore the industry's consent to operate along with the electricity connection. The



For BHARTI SCIENTIFIC DYERS
Toleer Ray
 Proprietor

industry shall be allowed to operate, and fresh samples of water (trade effluent) shall be collected at a convenient time after providing prior notice and an opportunity of hearing to the deponent.

For BHARTI SCIENTIFIC DYERS

J. S. Singh

Proprietor

Certified that the affidavit (S.P.A./G.P.A.) has been read over & explained to the deponent-executant who seemed correct & understand the same at the time of making above there of VERIFICATION

I, the deponent, do hereby solemnly affirm and declare that the contents of the above affidavit are true and correct to my knowledge and no part of it is false. No material has been concealed.

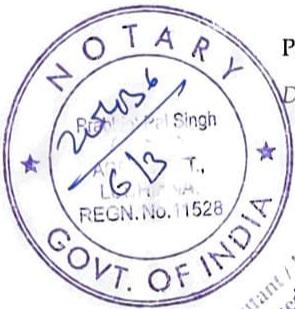
PLACE: *Ludhiana*
DATED: *06/03/25*

DEPONENT

For BHARTI SCIENTIFIC DYERS

J. S. Singh

Proprietor



I Know deponent / Executant / Antedemittent personally He / She has Signed / Thumb marked in my presence

Attested By
Prabhjot Singh
Prabhjot Pal Singh
Advocate) NOTARY PUBLIC
LUDHIANA (PB)

6/3/2015

FEASIBILITY REPORT

OF

EFFLUENT TREATMENT PLANT

(PRIMARY TREATMENT+BIOLOGICAL TREATMENT+TERTIARY TREATMENT)

(Capacity = 360 M³/Day)

(TREATED EFFLUENT DISCHARGE ON TO LAND FOR PLANTATION)

FOR

DYEING UNIT

**M/s. Bharti Scientific Dyres,
Vill. Meharbaan,
Rahon Road, Ludhiana, Punjab**

BY

**SEW WATER TREATMENT (P) LTD.
LUDHIANA**

For SEW WATER TREATMENT PVT. LTD.

Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS

Jilani Singh
Proprietor

INTRODUCTION

SEW Water Treatment (P) Ltd., Ludhiana has prepared this feasibility for the Effluent treatment plant has installed at M/s. Bharti Scientific Dyres, Vill. Meharbaan, rahon Road, Ludhiana.

The aspects presents in this feasibility study are

1. Identification of sources of waste generation and the estimation of quality and quantity of the waste.
2. The methods of treatment along with design calculations of plant and flow diagrams.
3. Adequacy report of existing ETP

However, due to variable nature of the effluents encountered in each plant, certain modification of process operation may be necessary depending on the degree of variation in the raw effluent quality and quantity.

This report includes a brief description of the basis of design of the ETP, the adopted treatment philosophy and the principles of treatment involved. The scheme envisages treatment of wastewater from dyeing process.

The ETP is designed in a way so that if the changing in processing nature to some other products, even then the ETP will be able to handle the treatment efficiency without any problem.

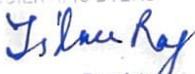
LOCATION OF INDUSTRY

The industry meets with the latest location guidelines of Punjab Pollution Control Board.

For SEW WATER TREATMENT PVT. LTD.


Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS


Proprietor

QUANTITY AND QUALITY OF WASTE WATER

Water is required only during dyeing of acrylic yarn & polyester fabrics and as such wastewater has generated only during this operation.

Quantity

The quantity of wastewater produced during the process is estimated as below at installed processing capacity of unit: 120 Kl/day

Design discharge for ETP in 24 hrs : 360 kl / day

Note: The industry recycles all cooling water which generates from indirect cooling from dyeing machines.

Capacity of the Effluent Treatment Plant (ETP)

The effluent treatment plant has been designed on the basis of the following:

- Dyeing capacity
- Operated continuously for 24 hours a day.
- Flow rate of treatment envisaged is 15 m³ / hr.

Raw effluent & Treated Water Characteristics

S.No.	Parameter	Inlet effluent parameters	Treated effluent parameters
1.	pH	6.5-9.5	6.5-7.5
2.	TSS	200-250 ppm	< 25 ppm
3.	TDS	650-850 ppm	<1000 ppm
4.	BOD	125-140 ppm	<30 ppm
5.	COD	400-550 ppm	<100 ppm
6.	Oil & Grease	10-15 ppm	<5 ppm
7.	SAR	-	<26

* TDS levels are outside the purview of the system design and would remain that as at inlet. Standards for TDS are < 2100 mg/l.

For SEW WATER TREATMENT PVT. LTD.


Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS


Proprietor

THE EFFLUENT TREATMENT SCHEME

Treatment of wastewater mainly depends on the characteristics of effluent, volume of effluent, level of toxicity to be removed and the type of environment to receive the effluent. The treatment process that has been adopted for the Effluent Treatment Plant to be installed at industry is known as physico chemical process. The physico chemical process consists of screening, coagulation and flocculation and sedimentation. The physico chemical process removes a substantial part of all the parameters shown in above table.

Process description of ETP:-

Bar Screen and O&G Chamber:

The effluent flows through Bar Screen and O&G Chamber into the equalization tank. The screen arrests suspended particles fiber and floating suspended matters like polythene paper, polythene bags, rags and others materials are removed by bar screen net. The screen is required to be cleaned periodically. And oil & Grease chamber are used for trap the oil and grease from the effluent wastewater.

Equalization Tank:

The tank acts as a holding tank for the raw effluent. The tank serves the purpose of homogenizing the flow, equalizes the peak loads, and feeds wastewater at a uniform rate to the rest of the treatment plant. A small quantity of air is fed into the tank to prevent development of odor & septicity.

Coagulation, Flocculation Tank & Primary Settling Tank:

Effluent wastewater are pump into baffled type reaction tank to raise pH by lime then coagulation tank where ferrous sulphate are used for further treatment and then overflow into flocculation tank where poly are dosed and increased the particle size of colloidal particles and overflow into the primary tube settler tank. In the primary tube settler tank, its have Tube Deck PVC Media. Here all the precipitated solids separate and the overflow of treated water go to the filter feed tank.

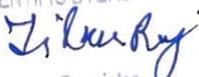
Filter Feed Tank:

The overflow from the tube settler is collected in a tank. From this tank water will be feed into PSF & ACF with required sets of pumps. The tertiary treatment is carried out with the following units, for further reduction in TSS, BOD, odour and colour.

For SEW WATER TREATMENT PVT. LTD.


Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS


Proprietor

Pressure Sand Filter (PSF):

The treated sewage from the treated water tank is pumped to pressure sand filter, filled with filter media comprising of graded gravel / sand. The suspended particulate matter is arrested and the clean filtered water coming out from pressure sand filter is led to activated carbon filter for further treatment.

Activated Carbon Filter (ACF):

The filter water from the PSF passes through the activated carbon filter, which is again a vertical pressure vessel, filled with filter media comprising of activated carbon granules over a bed of graded gravel.

Any odour and to some extent colour, in the waste water is removed by the carbon and the filter water is absolutely clear.

Sludge disposal:

The excess sludge generated is drained on sludge drying beds. The sludge drying bed process is a simple method of dewatering sludge that involves spreading a thin layer of sludge over a porous bed of sand and gravel. The liquid in the sludge drains through the bed by gravity and filtrate goes back to the equalization tank.

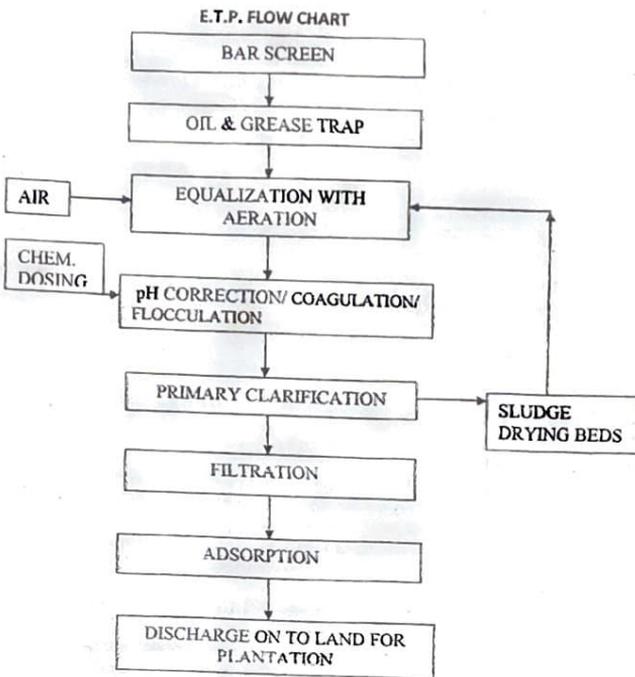
The treatment scheme flow sheet is presented in figure-A.

For SEW WATER TREATMENT PVT. LTD.


Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS


Proprietor



For SEW WATER TREATMENT PVT. LTD.

Figure-A

Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS

Is'har Ray
Proprietor

Preparation of the chemical dosing

Before starting the operation it will be necessary prepare all the necessary chemical solutions. The procedures of preparing the solutions are described below:

Preparation of the Lime (Ca(OH)₂) solution

During preparing the dosing solution of lime a 5% solution is prepared. In this regard the dosing tank, which is fitted with an air mixer, is at first filled with 500 litres of water. After that 25 kgs of lime is added and the Blower is switched on to stir the solution. The stirring should be continued on a 24-hour basis i.e. as long as the plant runs. After that the solution is ready for dosing. It is necessary to adjust the manual cock to get the desired flow.

Preparation of the Ferrous Sulphate (FeSO₄) solution

During preparing the dosing solution of ferrous sulphate a 10% solution is prepared. In this regard the dosing tank, which is fitted with an air mixer, is at first filled with 500 litres of water. After that 50 kgs of ferrous sulphate is added and the Blower is switched on to stir the solution. The stirring is continued. After that the solution is ready for dosing. It is necessary to adjust the manual cock to get the desired flow.

Preparation of the Poly Electrolyte (PE) solution

During preparing the dosing solution of Poly electrolyte, a 0.05% solution is prepared. In this regard the dosing tank, which is fitted with an air mixer, is at first filled with 100 litres of water. After that 100 gms of PE is added and the blower is switched on to stir the solution. The stirring should be continued on a 24-hour basis i.e. as long as the plant runs. After that the solution is ready for dosing. It is necessary to adjust the manual cock to get the desired flow.

For SEW WATER TREATMENT PVT. LTD.


Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS


Proprietor

BASIC DESIGN CRITERIA OF ETP CAPACITY 360 KLD

Design flow rate	:	15 kl/hr
Average BOD load of influent	:	140 mg/l
Suspended solids	:	250 mg/l

DESIGN OF BAR SCREEN CHAMBER

Quantity	:	1 No.
Type	:	Manual
Size	:	1.5 m x 0.5 m x 0.9 m
Coarse screen	:	12-15 mm
Fine screen	:	8-10 mm

DESIGN OF OIL & GREASE TRAP TANK

Type	:	Syphon riser pipe
Size	:	1.5 m x 4.8 m x 3.6 m
Total volume of tank	:	25 m ³

DESIGN OF RECTANGULAR PLAIN EQUALIZATION TANK

Size	:	6.6 m x 4.8 m x 3.6 m
Total volume of tank	:	110 m ³
Min. Retention period required	:	8 hr
Coarse Diffusers air grid	:	1 set

COOLING TOWER

Type	:	Induced draft
Max.Temp. difference	:	12°C
Capacity	:	150 TR

*Eq. tank volume is adequate to equalize the effluent with diffused air grid and cooling tower to control temp. <35°C.

SELECTION OF ROOTS AIR BLOWER FOR EQ. TANK

Air discharge at 0.5 m	:	120 m ³ /hr
Motor capacity	:	5 HP+7.5 HP
Quantity	:	1W+1S

*Adequate for Eq. tank and chemical mixing tank.

SELECTION OF MAIN PUMP

Average flow rate	:	15 m ³ /hr
Pump head	:	15 m
Required power for pump	:	5 HP, 3 Phase, 440 V
Suction/Delivery size	:	80 mm X 50 mm
Quantity	:	1W+1S

*Adequate for design flow rate 15 m³/hr

For SEW WATER TREATMENT PVT. LTD.

Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS

J. K. Singh

Proprietor

DESIGN OF BAFFLED TYPE REACTION TANK

Retention period	:	5 minutes
Total volume	:	2.5 m ³
Size of tank provided	:	0.45 x 0.45 x 19.8 m

*Adequate for a flow rate 15 m³/hr.

DESIGN OF COAGULATION TANK

Quantity	:	1 No.
Size of tank	:	2.7 dia X 2.5 m H
Total volume	:	10 m ³
RPM of agitator	:	80
Required power for agitator	:	3 HP
Min. Retention period required	:	15 minutes

*Adequate for a flow rate 15 m³/hr.

DESIGN OF FLOCCULATION TANK

Quantity	:	1 No.
Size of tank	:	1.35 dia X 3 m H
Total volume	:	4 m ³
RPM of agitator	:	30
Required power for agitator	:	1 HP
Min. Retention period required	:	10 minutes

*Adequate for a flow rate 15 m³/hr.

DESIGN OF CHEMICAL DOSING TANKS

Dosing tank for lime	:	1500 litres capacity
Location of dosing	:	Baffled type reaction tank
Dosing tank for ferrous Sulphate	:	1500 litres capacity
Location of dosing	:	Coagulation tank
Dosing tank for polyelectrolyte	:	100 litres capacity
Location of dosing	:	Flocculation tank

DESIGN OF PRIMARY TUBE SETTLER - I & II (working in parallel)

Average design flow	:	15 kl/hr
Tube Settler - I (6 kl/hr)	:	
Design sedimentation velocity	:	0.6 m/hr
Height of tube settler	:	2.85 m (without hopper)
Top area of tube settler	:	2.5 x 1.8 m
Angle of tube	:	60°
Type of tube deck media	:	Hexagonal shape
Volume of tube settler	:	12.8 m ³
Design retention period	:	2.0 hrs
Surface loading rate (SLR)	:	1.5-3 m ³ /m ² /hr

For SEW WATER TREATMENT PVT. LTD.


Auth. Signatory/ Director

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Tube Settler-II (9 kl/hr)

Design sedimentation velocity	:	0.6 m/hr
Height of tube settler	:	1.85 m (without hopper)
Top area of tube settler	:	3.45 x 2.85 m
Angle of tube	:	60°
Type of tube deck media	:	Hexagonal shape
Volume of tube settler	:	18 m ³
Design retention period	:	2.0 hrs
Surface loading rate (SLR)	:	1.5-3 m ³ /m ² /hr

*Adequate both tube settler working in parallel for a flow rate 15 m³/hr.

VOLUME OF FILTER FEED TANK : 2.4x2.4x1.1 m=5.5 M³

SELECTION OF FILTER PUMP

Average flow rate	:	15 m ³ /hr
Pump head	:	28 m
Required power for pump	:	7.5 HP, 3 Phase, 440 V
Suction/Delivery size	:	80 mm X 80 mm

*Adequate for a flow rate 15 m³/hr.

DESIGN OF PRESSURE SAND FILTER -2 No. (Working in parallel or one as a standby)

Typical value of velocity for filter	:	10-20 m/hr
Area of sand filter	:	A= Q/v=15/15= 1 m ² , r ² = 1/3.14= 0.32, r = 0.564 m
Dia. of pressure sand filter	:	1200 mm
H.O.S.	:	2000 mm
Min. depth of filtering media	:	1200 mm
Depth of multi graded media	:	300+300+300+400 mm
Free space board provided	:	700 mm

DESIGN OF ACTIVATED CARBON FILTER -2 No. (Working in parallel or one as a standby)

Typical value of velocity for filter	:	10-20 m/hr
Area of sand filter	:	A= Q/v=15/15= 1 m ² , r ² = 1/3.14= 0.32, r = 0.564 m
Dia. of filter	:	1200 mm
H.O.S.	:	3000 mm
Bed depth	:	1500 mm
Qty. of activated carbon	:	600 kg
Iodine value of activated carbon	:	900+

*Adequate both filter PSF & ACF in parallel for a flow rate 30 m³/hr.

For SEW WATER TREATMENT PVT. LTD.

Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS

J. K. Roy
Proprietor

SLUDGE DRYING BEDS

Size : 6 m x 2.1 m x 1 m-1 No.
 Size : 3 m x 2.7 m x 0.8 m-2 No.
 Sludge generation : Approx. 72 kg @ 360 KLD

Packed in HDPE bags and stored in a hazardous waste storage room.

Miscellaneous Information

- Requirement of power:
 - Installed : 45 HP
 - Operational : 25 HP
- Requirement of manpower : 1 + 2 No.
- Requirement of land for E.T.P. : sufficient

MODE OF DISCHARGE

The industry will discharge its treated trade effluent on to land for plantation. The industry has developed plantation area (1.75 acre) as per Karmal technology.

Total discharge : 120 kl/day
 Water consumption : 70 kl/acre
 Total land area required : 1.75 acre

SUMMARY AND CONCLUSION

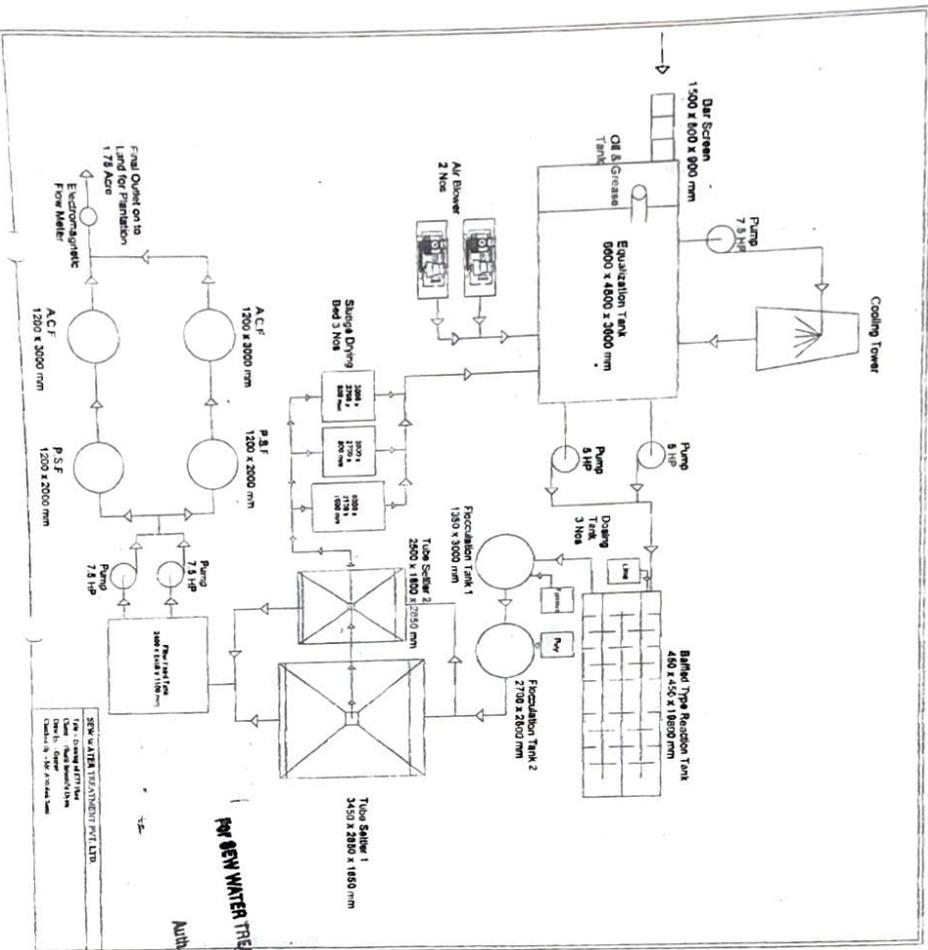
The study report for establishing the feasibility of an adequate ETP, in the previous pages throws light on the various aspects of the matter. It can be seen that the waste water from the dyeing unit can be treated as per the process mentioned to meet the parameters of the Punjab Pollution Control Board.

For SEW WATER TREATMENT PVT. LTD.


 Auth. Signatory/ Director

For BHARTI SCIENTIFIC DYERS


 Proprietor



SEWER WATER TREATMENT PVT. LTD.
 Auth. Secretary/ Director

For BHARTI SCIENTIFIC DYERS
J. S. Ray
 Proprietor

Annexure-R4/2



EROS ENVIROTECH PRIVATE LTD
(Formerly Eros Consultant)

Date: 05.03.2025

M/s Bharti Scientific Dyers,
Village Meharban,
Rahon Road, Ludhiana.

SUB: OBSERVATION, INSPECTION & SERVICING REPORT OF ETP @ 360 KLD

Dear Sir,

Please refer our engineer visit regarding service, operation & observation of Effluent Treatment Plant. We have serviced your ETP and Observation thereafter as following:-

1. Flow rate of ETP has been set as per plant capacity.
2. Mixing arrangements for chemical dosing has been provided. (photograph attached)
3. Media for filter vessel has been provided. (copy of bill attached)
4. Working of ETP equipment's is okay.
5. Operational & maintenance training has been provided to operator. (training report attached)
6. Kindly note the suggestions for ETP as mentioned below :-
 - a. Please check/set the flow rate of ETP (max 15kl/hr.) on daily basis.
 - b. Please maintain pH value 7.5 at final outlet.
 - c. Please apply backwash of filter vessels after 8 hours.
 - d. Please drain sludge in sludge bed daily.

Thanks & Regards

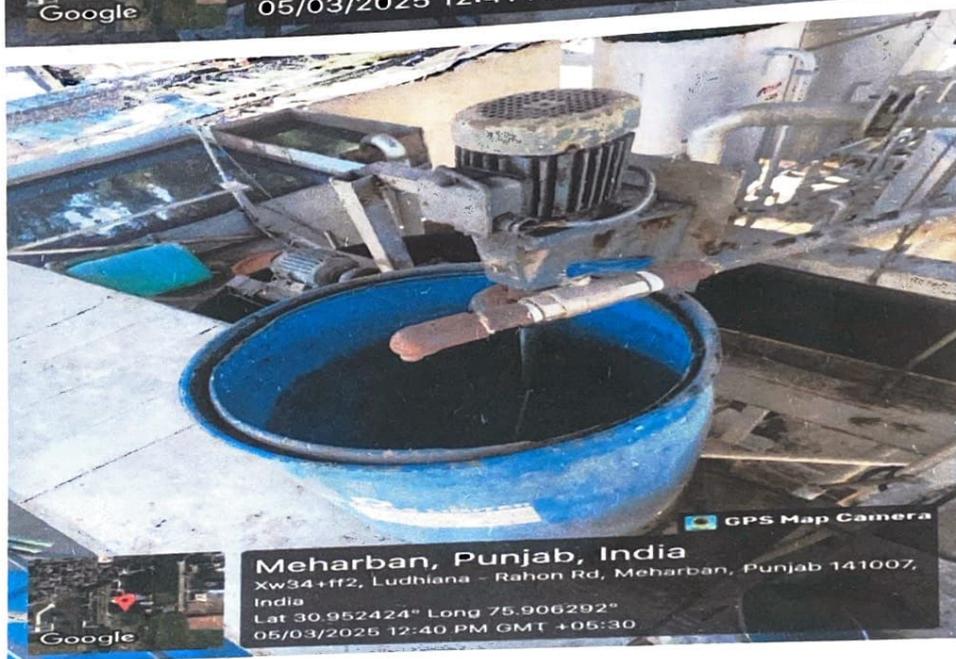
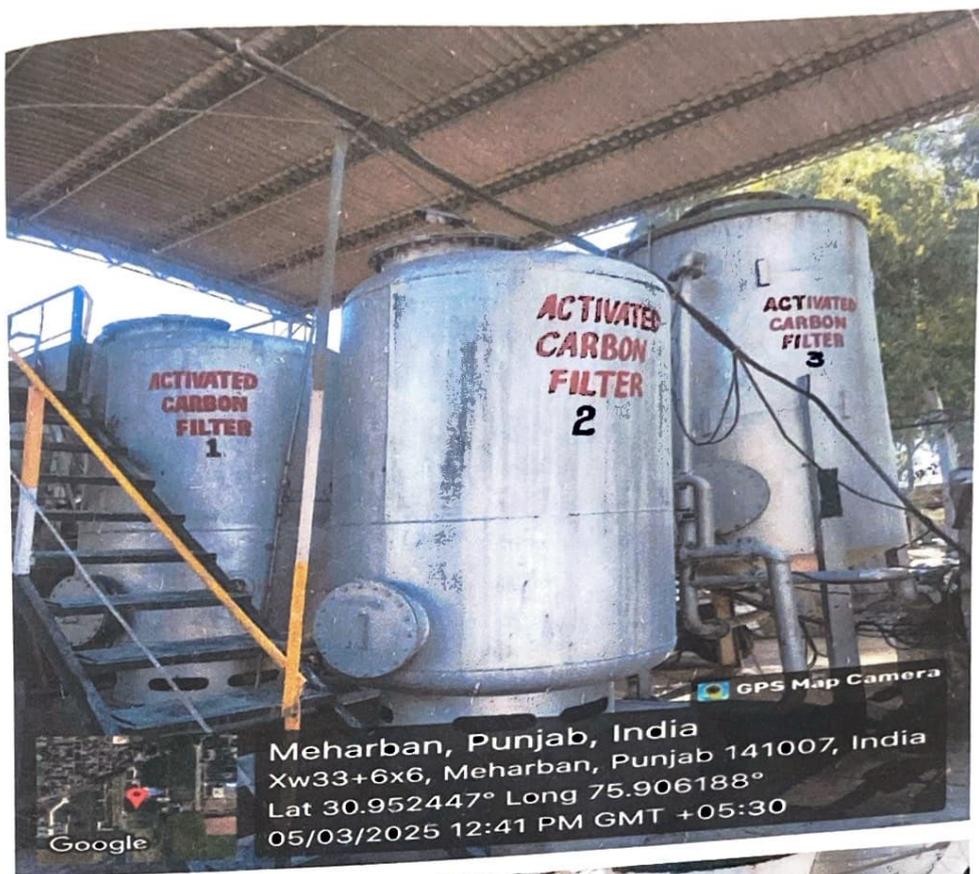
Eros Envirotech (P) Ltd.

Rajesh Maheshwari
(B.E. Chemical Engineering)
Managing Director

For BHARTI SCIENTIFIC DYERS

Proprietor

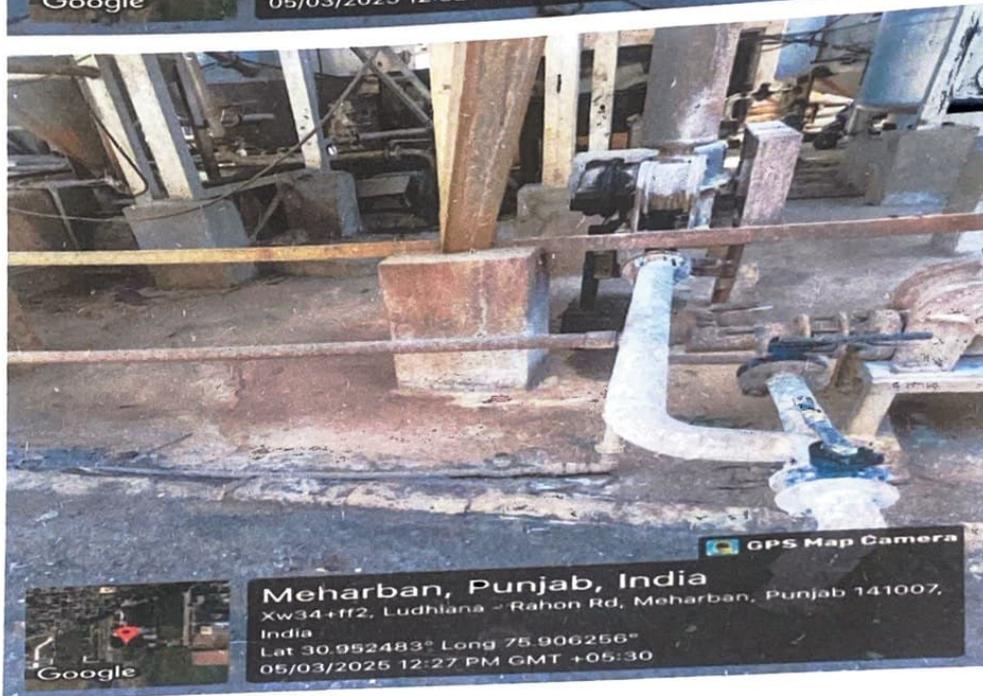
Annexure-R4/2



For BPH/PTI/ST/ENIT/PC/DYERS

Is Love Roy

Proprietor



For B-UNIT SCIENTIFIC DYERS

Proprietor

ORIGINAL FOR RECIPIENT Annexure-R4/3

B F P L	Company's Name : BABJI FILTRATIONS PRIVATE LIMITED		Invoice No. BF/0827/24-25	Dated: 17-2-25
	Address: Super Mail S-20 2 nd Floor Salunke Vihar Road Wanowri-411040		Delivery Note	Mode/Terms of Payment 0 Days Due on 17/02/2025
	GSTIN/UIN: 27AALCB1120C1ZB		Reference No. & Date. VERBAL	Other References
	State : Maharashtra	Pin code : 411040	Buyer's Order No. On Phone	Dated 17-2-25
Contact Details: 8446744111/8446255777 e-Mail : sales@babjifiltrations.com				

Buyer & Consignee		Dispatch Doc No.	Delivery Note Date
Company's Name: BHARTI SCIENTIFIC DYERS		1709 Dated 17-2-2025	17-2-25
Address: Village Meharbaan, Rahon Road, Ludhiana		Dispatched through Private	Destination Ludhiana
Mobilen. 9855514091(MR. ASHU)		Bill of Lading/LR-RR No. 1094728816	Motor Vehicle No.
GSTIN/UIN: 03ABKPB7959C1ZU			
State: Punjab	Pin code: 141007		

Sl. No.	Description of Goods	HSN/SAC	Quantity	Rate Per Kg	Amount
1.	ACTIVATED COCONUT SHELL CARBON IV1200	38021000	600 KGS	88/-	52,800.00
			Sub Total		52,800.00
				I-Gst 18% on Amount 52800	9,504.00
			Grand Total		62,304.00

1094728816
24 PB

Amount Chargeable (In words). RUPEES SIXTY TWO THOUSAND THREE HUNDRED AND FOUR ONLY.

Declaration:
We declare that this invoice shows the actual price of the goods described and that all Particulars are true and correct.

<p>TERMS AND CONDITIONS: Subject to Pune Jurisdiction only. Interest @18 % will be charged on bill not paid within due date</p> <p>BANK: KOTAK MAHSHORA BANK COMPANY NAME: BABJI FILTRATIONS PRIVATE LIMITED A/C: 4419690788 IFSC CODE: KKBK0008734 SALUNKE VIHAR ROAD BRANCH</p>	<p>Customer's Seal and Signature</p>	<p>For BABJI FILTRATIONS PRIVATE LIMITED</p> <p style="text-align: center;"><i>[Signature]</i> Authorized Signatory</p>
--	--	---

24 PB $\frac{600}{600}$ Paid Godown.

For BHARTI SCIENTIFIC DYERS
[Signature]
Proprietor

Minutes of Meeting

Name M/S Bharti Scientific Dyers

Date:04/03/2025

Village-Meharban, Rahon Road

Ludhiana

Discussion/Suggestion/Information

Today visited the site for given operational training for E.T.P. Unit -

1. Flow rate of both raw influent lift pump has been set as per plant capacity.
2. Please check the flow rate on daily basis.
3. Flow rate of chemical dosing tank has been set according to waste water flow rate, please check the chemical dosing flow rate after every hour.
4. Please check the pH value of waste water on daily basis on, before adding in flocculator tank.
5. Please drain the sludge from bath tube settler often every 8 hour, as per requirement.
6. Please apply the backwash at filter vessel (PSF and ACF) one by one after every 8 hour.
7. Please check the (current) taking ampere of all pumps and motions on daily basis.
8. Please change the gear oil of air blower after every 30 days (EP-90)
9. Please redust the air filter of air blower after every 15 days.
10. Please check the alignment and belt tightened of blower after every 7 days.
11. Operational and maintenance training related E.T.P. has been given to operator (Mr. Pappu Ji).

Name Mr. Pappu Tati

Designation ETP Operator

M.

Email

Sign. Signed

Name Sanny Kharwar

Designation Engineer

M. 98554-23638

Email eros.sannyk@gmail.com

For Eros Envirotech (P) Ltd.

For BHARTI SCIENTIFIC DYERS



Proprietor

Minutes of Meeting

Name M/S Bharti Scientific Dyers
Village-Meharban, Rahon Road
Ludhiana

Date:04/03/2025

Discussion/Suggestion/Information

Visited at site for service/operation of E.T.P. Unit -

1. Flow rate of both raw influent lift pump has been set as per plant capacity.
2. Mixer arrangement has been provided for chemical mixing.
3. Dosing tank working is okay.
4. Chemical mixture is okay.
5. Flow rate of chemical dosing has been set according to waste water flow.
6. Media has been provided for (4 Nos.) PSF and ACF filter vessel.

Name Mr. Pappu Tati
Designation ETP Operator

M.

Email

Sign. Signed

Name Sanny Kharwar

Designation Engineer

M. 98554-23638

Email eros.sannyk@gmail.com

For Eros Envirotech (P) Ltd.

For BHARTI SCIENTIFIC DYERS

Iskhan Roy
Proprietor

EROS

Date 04/03/2025Minutes of Meeting

Name M.S. Bharti Scientific
 Designation Asst. Mgr. Mahabharat, Kharwar
 Board Ludhiana

Discussion/Suggestion/Information

- Today visited the site for given operational training for E.T.P. unit :-
- 1) Flow rate of both raw influent lift pump has been set as per plant capacity.
 - 2) Please check the flow rate on daily basis.
 - 3) Flow rate of chemical dosing tank has been set according to waste water flow rate, please check the chemical dosing flow rate after every hour.
 - 4) Please check the pH value of waste water on daily basis or, before adding in flocculator tank.
 - 5) Please drain the sludge from both tube settler after every 2 hour or, as per requirement.
 - 6) Please apply the backwash of filter vessel (PSF and ACF) one by one after every 2 hour.
 - 7) Please check the (current) testing ampere of all pumps and motors on daily basis.
 - 8) Please change the gear oil of air blower after every 30 days (EP-46).
 - 9) Please redust the air filter of air blower after every 15 days.
 - 10) Please check the alignment and belt tightness of blower after every 7 days.
 - 11) Operational and maintenance training related E.T.P. has been given to operator (Mr. Pappu Ji).

If you need any clarification/assistance, Please call 98149-01638 or mail us on eros.amrik@gmail.com

Name Mr. Pappu Tati
 Designation E.T.P. Operator
 M. _____
 Email _____
 Sign. [Signature]

Name: Sanny Kharwar
 Designation: Engineer Sanny Kharwar
 M: 98554-23638
 Email: eros.sannyk@gmail.com
 For Eros Envirotech (P) Ltd.

For BHARTI SCIENTIFIC DYERS

[Signature]
 Proprietor

EROS

Date 04/03/2025Minutes of Meeting

Name M.S. Bharti Scientific
 Dyers, Vill - Mehra, Baban
 Road - Ludhiana

Discussion/Suggestion/Information

Visited at site for service/operation of E.T.P. Unit :-

- 1) Flow rate of both raw influent lift pump has been set as per plant capacity.
- 2) Mixer arrangement has been provided for chemical mixing.
- 3) Dosing tank working is okay.
- 4) Chemical mixture is okay.
- 5) Flow rate of chemical dosing has been set according to waste water flow.
- 6) Media has been provided for (4 HRS.) PSF and RCF filter media.

If you need any clarification/assistance, Please call 98149-01638 or mail us on eros.amrik@gmail.com

Name Mr. Pappu Tati
 Designation E.T.P. Operator
 M. _____
 Email _____
 Sign. [Signature]

Name: Sanny Kharwar
 Designation: Engineer [Signature]
 M: 98554-23638
 Email: eros.sannyk@gmail.com
 For Eros Envirotech (P) Ltd.

For BHARTI SCIENTIFIC DYERS

[Signature]
 Proprietor