INDEX

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
(M.A. No. 70/2023 in Original Application No. 105/2023)

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

M.A. No. 70/2023
In
Original Application No. 105/2023

IN THE MATTER OF:

M. L. Dhiman — Applicant

Versus

State of Punjab — Respondent

Report of the Joint Committee Comprising of Ministry of Environment, Forests and Climate Change, Central Pollution Control Board, in the Matter of M.A No.70/2023 (In O.A No. 105/2023) submitted to Hon'ble National Green Tribunal, Principal Bench, New Delhi in compliance to Hon'ble NGT order dated April 05, 2024.

Submitted to

HON'BLE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

1. Preamble

The grievance in this application is regarding discharging industrial chemical effluent by M/s AKUMS Life Science Ltd. at Village Sundran, Tehsil Dera Bassi, District Mohali (Punjab) leading to damage of crops and nearby agricultural fields. The Hon'ble National Green Tribunal (Principal Bench) in its order dated 25.01.2024 directed to submit status report. PPCB has been submitted its status report to the Hon'ble National Green Tribunal.

In this context, further the Hon'ble National Green Tribunal order dated 05.04.2024 constituted a Joint Committee comprising of the Regional Officer, Ministry of Environment, Forest and Climate Change (MoEF&CC), Chandigarh and representative of Member Secretary, Central Pollution Control Board (CPCB). The RO, MoEF&CC will be the nodal agency for coordination and compliance.

2. Order of the Hon'ble National Green Tribunal Dated 05.04.2024

The Hon'ble NGT in its order dated 05.04.2024 constituted a Joint Committee comprising of the Regional Officer (RO), Ministry of Environment, Forest and Climate Change (MoEF&CC), Chandigarh and representative of Member Secretary, Central Pollution Control Board (CPCB). The RO, MoEF&CC will be the nodal agency for coordination and compliance.

The Hon'ble NGT had directed, the Joint Committee will visit the site, collect all the information relating to compliance of requisite norms by Respondent No. 3 and submit the report before the Tribunal within six weeks by e-mail. In compliance to Hon'ble NGT order, committee comprising of following members was composed:

1. Dr. Dharmendra Kumar Gupta, Scientist-F, MoEF&CC Regional Office, Chandigarh, (Representative of MoEF&CC).

2. J.P. Meena, Scientist-D, CPCB, Regional Directorate, Chandigarh (Representative of CPCB).

3. Site Visit by the Joint Committee:

The committee inspected M/s AKUMS Life Science Ltd. located at Village Sundran, Tehsil Dera Bassi, District Mohali, Punjab on May 28th, 2024 and inspected industry premises and surrounding areas and also interacted to local nearby village residents. At the time of visit, committee visited surrounding area and collected sample from various stages of ETP and in house STP also Ground Water samples from inside the unit premises and outside area (Agricultural Tube wells) of the farmers which is located Up-stream and down-stream of the unit to verify the complaint issue and ascertain the correct position at the spot and further collected secondary information from the unit representatives related plant process and treatment process of the effluent etc. At the time of visit, the unit representative informed that M/s Akums

Life Science Ltd. acquired the plant from National Company Law Tribunal (NCLT) on 23 Feb 2021. Previously this was owned by M/s Parabolic Drugs, which was declared bankrupt and has undergone insolvency proceedings through NCLT. After taking over this facility, M/s Akums Life Science Ltd. has been upgraded its ETP and emissions control system to achieve the regulatory norms.

3.1 Observations made by the committee during inspection of M/s AKUMS Life Science Ltd., Derabassi (Punjab).

1. On the day of inspection (May 28, 2024) the unit was operational and manufacturing Active Pharmaceutical Ingredients.
2. The unit has obtained Consent to Operate from the Punjab Pollution Control Board (PPCB) for manufacturing only 7 products. The total production capacity of the industry, as per the current permissions from PPCB, is 466.67 kg/day. However, the unit reportedly was producing 326 kg/day, on the day of visit.
3. The unit is meeting its water requirement for industrial and domestic purpose through 02 bore wells. Electromagnetic type flow meters were installed at abstraction points and maintaining log book of the same. As per log book records of four month water consumption are tabulated below:

   Table-01

Months	Permitted quantity (KL)	Monthly Ground Water Extracted (KL) from bore wells
February-24	10500	2980
March-24	10500	2875
April-24	10500	3312
May-24	10500	2777

4. The unit has obtained permission (15/05/2024) from Punjab Water Regulation and Development Authority (PWRDA) valid up to 14/05/2027 for extraction of ground water. The permitted water quantity is 10500 m^3/month.

Effluent Generation and its Treatment:

5. The unit has installed electromagnetic type flow measuring system at inlet of Low TDS stream and recycling point (R.O. [Reverse Osmosis] permeate) and R.O. Reject and records of the same were maintaining.
6. At the time of visit, committee observed that the unit is segregating High TDS and Low TDS effluents depending upon the concentration of TDS in effluent. The High TDS/COD and Low TDS/COD effluents are treated separately in the following treatment scheme:

6.1 **Low TDS/COD Effluent:** The unit has installed an ETP of 200 KLD capacity which is based on biological followed by Tertiary treatment (UF, R.O) which treats the MEE Condensate, Low TDS effluent from process, cooling Tower & Boiler Blow down. As reported, the unit is generated to tune of 70 KLD low TDS effluent. The ETP is comprises of Oil & Grease trap > Equalization Tank-I & Equalization Tank-II > Flash Mixer > Flocculation Tank-I > Primary Settling Tank > Aeration Tank-I > Secondary Clarifier-I > Intermediate Holding Tank > Aeration Tank-II > Secondary Clarifier-II > Intermediate Holding Tank > Tertiary Settling Tank > Filter Feed Tank> Multi Grade Filter > Activated Carbon Filter > Ultra Filtration > R.O Feed Tank > 02 stage R.O (of capacity 200 m^3/day) > R.O Permeate Tank > R.O Reject Tank. The R.O permeate is sent for cooling tower make up and boiler feed. However, R.O. Reject & its CIP back to MEE (of 130 KLD capacity 04 stage forced evaporation) and its concentrate is fed into Agitated Thin Film Dryer (ATFD) for drying.

6.2 **High TDS/COD Effluent:** The unit informed that High Total Dissolved Solids (High TDS/High COD) effluent generated from floor washing, Vessel washing scrubbing media of Air Pollution Control Device (APCD), Vacuum Pump, DI Plant and CIP of Multi effect evaporator/Agitated Thin Film Dryer (MEE/ATFD, CIP of R.O. etc.). As reported, the high TDS (High-TDS/High COD) effluent is generated to tune of 23-36 KLD. This stream effluent is collected in high TDS Tank and after neutralization it is fed into MEE of 130 KLD capacity (4 stage forced evaporation) for treatment and further MEE concentrate is routed to ATFD of capacity 1300 Kg/hr for treatment of MEE Concentrate. The dry sludge of ATFD is stored in separate room and it is sent to CHWTSDF located at Nimbua (Derabassi), Punjab for final disposal. The vapor from ATFD is condensed using condenser & MEE condensate is routed through Low TDS ETP for further treatment.

7. The unit has installed Online Continues Effluent Monitoring System (OCEMS) at final outlet (R.O recycling point) for measuring consented parameters flow, pH, TSS, BOD, COD and its connected to CPCB/PPCB server.

8. At the time of visit, it was observed that the instantaneous value of OCEMS were pH 7.61, TSS-37 mg/l, COD-72 mg/l & BOD-17 mg/l respectively.

9. The Committee had collected the samples on 28.05.2024 from (ETP of Low TDS effluent) unit i.e. Equalization Tanks, Aeration Tank and R.O permeate to verify the efficacy of the treatment system and compliance verification of the prescribed norms. The analysis results of ETP (Table 02) presented below :

Table-02

S. No.	Parameters	Units	ETP inlet (AE-01)	Aeration Tank (AE-02)	R.O Feed (AE-03)	R.O Permeate (AE-04)	Prescribed MoEF&CC effluent norms vide dated 06.08.2021
1.	pH	mg/l	7.1	--	8.4	9.4	6.0-8.5
2.	TDS	mg/l	7072	--	1840	332	NS[$]
3.	TSS	mg/l	322	--	266	< 10	100
4.	COD	mg/l	4187	-	1409	283	250
5.	BOD	mg/l	2360	--	870	112	30
6.	Phosphate as P	mg/l	BDL[*]	--	0.16	BDL	5
7.	Oil & Grease	mg/l	BDL	--	BDL	BDL	10
8.	Ammonical Nitrogen	mg/l	207.76	--	985.6	129.36	100
9.	Sulphide	mg/l	2	--	BDL	BDL	2
10.	Phenolic compounds	mg/l	0.58	--	0.55	0.53	1
11.	Hexavalent chromium (Cr^{+6})	mg/l	BDL	--	BDL	BDL	0.1
12.	EC	µS/cm	--	--	--	1028	NS
13.	Boron	mg/l	--	--	--	BDL	NS
14.	SAR	--	--	--	--	2	26
15.	MLSS	mg/l		9723	--	--	
16.	MLVSS	mg/l		4660	--	--	
17.	Arsenic (As)	mg/l	0.016	--	0.019	BDL	0.2
18.	Chromium	mg/l	0.054	--	0.010	0.008	2
19.	Cupper (Cu)	mg/l	0.039	--	0.008	BDL	3
20.	Lead (Pb)	mg/l	BDL	--	BDL	BDL	0.1
21.	Zinc (Zn)	mg/l	0.381	--	0.267	0.133	5

*BDL: Below Detection Limit; [$]NS: Not Specified.

10. MoEF&CC has been notified effluent standards for bulk drugs and formulation (Pharmaceutical) vide dated 06.08.2021 (G.S.R.541 (E). These effluent standards applicable to all discharge to land and surface water bodies including use of treated wastewater for horticulture or irrigation purposes.
11. It is evident from the analysis result (Table-02) that the unit is generally complying the effluent discharge norms except BOD, COD, pH and Ammonical Nitrogen. Although as per consent condition, R.O. permeate is reused/recycled in cooling tower make up. From above analysis results, the R.O permeate (ETP treated effluent) the concentration of TDS- 332 mg/l, EC-1028

µS/cm, boron-BDL, SAR-02 seems satisfactory range. Hence, the R.O permeate may be reused/recycled in cooling tower make up.

12. From the analysis results R.O system (Inlet of R.O Feed to R.O Permeate) removal efficiency are as follows: TDS: 81.95%, COD: 79.91% & BOD: 87.12%.
13. At the time of visit, committee observed that no effluent is being discharged outside and hence claimed as Zero Liquid Discharge (ZLD).
14. The ratio of MLVSS to MLSS (MLVSS/MLSS ratio) was found 0.5, which indicates satisfactory operation of the biological system.

Sewage Treatment Plant Effluent Generation and Its Treatment:

15. The unit has installed a Sewage Treatment Plant (STP) of 50 KLD capacity which is based on Moving Bed Biofilm Reactor (MBBR) followed by filtration process for treatment of the domestic effluent. As per log book records on an average of 02 months about 11 KLD domestic effluent generated from the plant. However, about 10 KLD treated effluent is discharged from STP, as per the log book record.
16. The STP was comprised of Raw effluent Screening > Oil & Grease Trap > Sewage collection Tank > Bio-reactor (MBBR Tank) > Flocculation Tank > Clarifier > Surge Tank > Pressure Sand Filter > Activated Carbon Filter > Final Collection Tank.
17. The unit has provided flow measuring system at inlet & outlet of STP for measuring quantity domestic effluent generation and discharge.
18. At the time of visit, committee observed that STP treated effluent were used in 02 pockets of plantation area in the premises. As informed by the unit representative that the area of about 1.2 acres and another plantation area of about 1.0 acres near boiler. Committee observed that the unit has provided dedicated pipeline for carrying STP treated effluent for plantation area in its premise for irrigation purpose.
19. At the time of visit, committee observed that the filtration system of STP has not installed pressure gauge to check the performance.
20. At the time of visit, committee had taken effluent sample from STP Inlet, Bio-Reactor and final outlet to verify the norms. Analysis results of STP (Table-03) is presented below:

Table-03

S. No.	Parameters	Units	STP inlet (AS-01)	Bio-reactor Tank (AS-02)	STP outlet (AS-03)	General Standards for Discharge of Environmental Pollutants PART-A : Effluents (Land for Irrigation
1	pH	mg/l	7.0	--	7.6	5.5-9.0
2	TSS	mg/l	65	--	27	200
3	COD	mg/l	207	--	88	
4	TDS	mg/l	156	--	420	
5	BOD	mg/l	107	--	9	100
6	N-Total	mg/l	51.42	--	39.97	
7	NH_3-N	mg/l	43.12	--	16.8	
8	Boron	mg/l	--	--	0.02	
9	Fecal-Coliform	MPN/100 ml	49 $x10^7$	--	$13x10^3$	
10	MLSS	mg/l	--	7034		--
11	MLVSS	mg/l	--	4366	--	--
12	SAR	--	--	--	2	

21. It is evident from the above analysis results, the STP treated effluent is complying the General Discharge Standard for pH, TSS, BOD for discharge of Environmental pollutants– Effluents (Part A) under Schedule-VI of Environment (Protection) Rules, 1986, wherein standard for discharge into land for irrigation is notified. The general standards for allowing BOD-100 mg/l, to use for irrigation purpose.
22. At the time of committee visit, it was observed that STP treated water is used/recycled in their premises plantation areas and further reported by the unit representative that fresh water is also used in the plant irrigation, during high water demand period.
23. Further, committee observed that STP treated water was reused in-house plantation area, as per the consent conditions.
24. From the above analysis results of STP treated effluent characteristics shows values of TDS-420 mg/l, Boron-0.02 mg/l, BOD-09 mg/l and COD-88 mg/l and Sodium Adsorption Ratio (SAR-2) respectively, were found in acceptable limits, which indicates the STP treated effluent, may be used for plant irrigation.
25. The biomass in the Bio-reactor tank of STP was found satisfactory, which indicates satisfactory operation and maintenance of the STP.

26. The STP sludge was collected into Sludge collection tank, it was further fed into Plate and frame filter press for dewatering. The STP dried sludge was sent to mix with ETP Sludge and sent to CHWTSDF (Common Hazardous Waste Treatment Storage and Disposal Facility) for final disposal.

Source Emissions:

27. The unit has one 6 TPH (Tonne per Hour) boiler for producing steam using rice husk as fuel and provided multi cyclone followed bag house dust collector as Air Pollution Control Device (APCD) followed by 30 m stack height.
28. Online emission monitoring system has been installed at boiler stack for measuring consented parameter Particulate Matter (PM). At the time of visit instantaneous online emission value of PM-23.3 mg/Nm^3 was observed, which is complied.
29. The unit has provided three D.G sets of 1000, 500 & 625 KVA capacities respectively, which are equipped with canopies and sufficient stack heights.
30. The unit has installed one double chambered incinerator of 50 kg/hr capacity for incineration of solid/semi solid incinerable waste. On the day of visit, the incinerator was found non-operational as this is operated as and when required. The emission of incinerator was emitted to atmosphere through stack of height 30 m followed by ventury scrubber followed by packed bed scrubber as APCD.
31. The unit has installed adequate firefighting arrangements in their plant i.e. Hose Reel system, Fire Hydrant system, Sand buckets, Portable Fire Extinguishers, Electrical/manual siren for emergency/accident situation windsocks at 03 locations as basic guide to wind direction and speeds.
32. The unit possesses consents and authorization valid upto 31.12.2024 under the Water Act-1974 and the Air Act-1981 and authorization under the Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016 from PPCB.
33. The unit has installed solvent recovery column for recovery and reuse of solvents.
34. The unit has 69 number of Mild Steel (MS) storage tanks at solvent recovery plant of 647 KL total capacity. One vent each tank has equipped with activated carbon bed via vent condenser with chilled brine water as per guideline to control the odour and second vent of each tank also has breather valve cum flame arrestor that vent out only internal pressure more than 200 mm WC.
35. The unit is carrying out self-regulation through monitoring & analysis of effluent, ambient air & stack emissions periodically by NABL accredited laboratory.

Hazardous Waste Generation and Disposal:

36. The unit has provided separate room for storage of ETP sludge, incineration ash, MEE salts, used oil, empty container spent carbon and separate storage shed for organic residue/Distillation residue.
37. As per records, during the last 4 months from February to May, 2024, the unit has disposed chemical sludge from ETP (Category -35.3)-45.725 MT, MEE salts (Category -37.3) – 85.52 MT, Empty containers/barrels (Category -33.1) 1203 numbers and contaminated poly bags-3.995 MT, (Category-37.2) ash from incinerator and flue gas cleaning residue is 0.220 MT sent to CHWTSDF facility for final disposal.
38. The unit is registered with the CHWTSDF facility operated by M/s Re-Sustainability Limited located at Village Nimbua, Derabassi (Punjab) and it is periodically sending hazardous waste for final disposal.

Details of Ground Water Samples:

39. At the time of visit, committee collected 04 ground water samples, 02 Samples from inside of the unit premises (01 from Piezometer well-02, near plantation area and another sample from unit premises bore well No-02 near main gate of the unit). However, 01 ground water sample collected from upstream of the unit Agricultural field bore well (at village Badurgarh about 2 Km aerial distance from the unit), whereas 01 bore well sample of ground water also taken from downstream of the unit (at village Sundran about 1.0 km from the unit).
40. At the time of visit committee observed that, the bore wells samples were collected from upstream and downstream (BW-03, BW-04) which are used in irrigation purpose. However, bore well no. BW-02 are used for Plant process and other utilities purpose though Piezometer well (AW-02) which is used for measuring the ground water level.
41. Committee observed there are many industries located around these bore wells as this an industrial zone. Sampling location of the collected ground water samples of 01 Piezometer well and 03 bore well are presented below in table 04.

Table -04

S. No.	Sample Code	Description of sample Locations	Depth of the tube well as informed by the representatives	Physical appearance	Latitude	Longitude
1	AW-2	From the Piezometer well-02	126 ft	Colourless & odourless	30.60931	76.89634

		installed unit premise near plantation area				
2	BW-02	From the bore well-02 installed unit premise near main gate of the unit	350 ft	Colourless & odourless	30.6117	76.8982
3	BW-03	From the bore well at Village Badurgarh as reference sample Upstream about 2 Km from the unit)	350 ft	Colourless & odourless	30.5959	76.9008
4	BW-04	From the bore well at Village Sundran (Downstream of the unit about 1.0 km	450 ft	Colourless & odourless	30.6156	76.892892

42. The collected samples were analyzed by adopting (BIS & APHA) at CPCB H.O. Delhi laboratory. Physico-chemical biological and heavy metal analysis results of the ground water are tabulated in table 05. Analysis results of samples (Table-05) are presented below:

Table-05

Parameters	**Units**	**AW-02**	**BW-02**	**BW-03**	**BW-04**	**Permissible limit (10500:2012)**
pH	--	7.5	7.7	7.5	7.6	6.5-8.5
Colour	Cu	BDL*	BDL	BDL	BDL	15
Turbidity	NTU	14	01	07	01	05
Total Dissolved solids	mg/l	426	384	390	380	2000
Biochemical oxygen demand	mg/l	05	BDL	BDL	BDL	--
Chemical oxygen demand	mg/l	25	03	02	01	--
Ammonia (as total ammonia-N),	mg/l	1.38	0.83	1.42	1.16	0.5
Boron (as B)	mg/l	1.62	19.27	26.73	1.26	1.0
Calcium (as Ca)	mg/l	64	67	72	69	200
Chloride (as Cl)	mg/l	30	13	10	16	1000
Fluoride (as F)	mg/l	0.29	0.20	0.25	0.22	1.5
Magnesium (as Mg)	mg/l	05	12	12	09	100
Sulphate (as SO_4)	mg/l	16	12	07	10	400

Nitrate (as NO_3)	mg/l	BDL	BDL	0.73	1.08	45
Sulphide (as H_2S),	mg/l	BDL	BDL	BDL	0.80	0.05
Total alkalinity (as CaCO3)	mg/l	299	312	323	295	600
Total Hardness	mg/l	180	215	229	208	600
Phenolic compounds (as C_6H_5OH)	mg/l	BDL	0.17	0.19	0.10	0.002
Selenium (as Se)	mg/l	BDL	BDL	BDL	BDL	0.01
Manganese (as Mn)	mg/l	0.29	0.16	0.05	0.05	0.30
Iron (as Fe)	mg/l	4.58	0.31	0.63	0.13	0.30
Copper (as Cu)	mg/l	0.01	BDL	BDL	BDL	1.5
Zinc (as Zn)	mg/l	9.96	0.07	0.02	0.04	15
Cadmium (as Cd)	mg/l	BDL	BDL	BDL	BDL	0.003
Lead (as Pb)	mg/l	0.06	BDL	BDL	BDL	0.01
Nickel (as Ni)	mg/l	0.02	BDL	BDL	BDL	0.02
Total Arsenic (as As)	mg/l	BDL	BDL	BDL	BDL	0.01
Total Chromium (as Cr)	mg/l	0.07	BDL	BDL	BDL	0.05

*BDL: Below Detection Limit.

43. The ammonia concentrations were found exceeding the acceptable limit of BIS (BIS-10500, 2012) in all ground water samples which may be due to domestic, agricultural as well as industrial activities.
44. The boron concentrations were found exceeding the permissible limit of drinking water of BIS (BIS10500, 2012) in the all ground water samples which may be due to geo-genic as well anthropogenic activities in the area.
45. The phenolic compounds concentration were found exceeding the permissible limit in 03 ground water bore wells sample, which located 01 inside (BW-02) of the plant and other 02 located in up and down stream (BW-03 & BW-04). Whereas, Piezometer well located inside the unit (AW-02) was found BDL.
46. The sulphide concentrations were found BDL in samples no. AW-02, BW-02 & BW-03. However, in downstream bore well sample (BW-04), sulphide was found 0.80 mg/l against the acceptable limit 0.05 mg/l as per BIS 2012 standard.

Heavy metals:

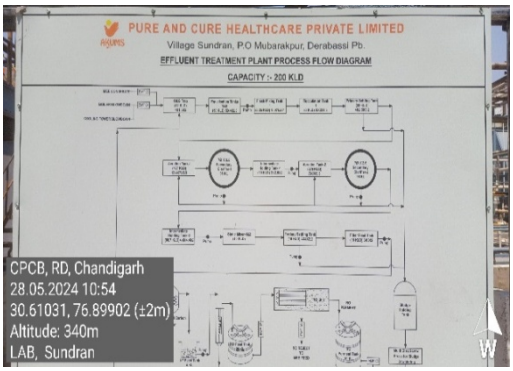
47. It is evident from above analysis results (Table-5) that heavy metals such as, Iron concentrations was found exceeding acceptable limit in BW-03 upstream and inside Piezometer well AW-02 water samples. This indicates possible intrusion of the scaling/corrosion of the pipeline whereas lead concentration and total chromium concentration were found exceeding the acceptable limit of BIS in the Piezometer well (AW-02). However, this contamination needs to be confirmed by carrying out details ground water monitoring of the area.

Suggestions of the Committee:

1. It is suggested to the industry that they shall carry out a detailed ground water monitoring of the unit area by reputed institutions to assess the ground water quality.
2. The unit shall improve proper operation & Maintenance of the ZLD based ETP system so as to achieve the norms and further to extent possible reuse/recycle in the system.
3. The unit shall install pressure gauge device at filtration system of ETP as well as STP to check the performance of filters and avoid chocking.
4. The unit shall be made proper approach to reach STP units i.e. Flocculation Tank, Bio-reactor (MBBR Tank), Clarifier and Surge Tank.
5. The unit shall enhance the capacity of mechanical sludge dewatering system to reduce the volume and weight of the ETP sludge.
6. The unit shall ensure regular maintenance and operation and calibration of the online system so as to obtain continuous accurate results.
7. The unit shall make proper furrows and ridges for the developed plantation area as per Karnal Technology.

Photographs taken during the day of visit:

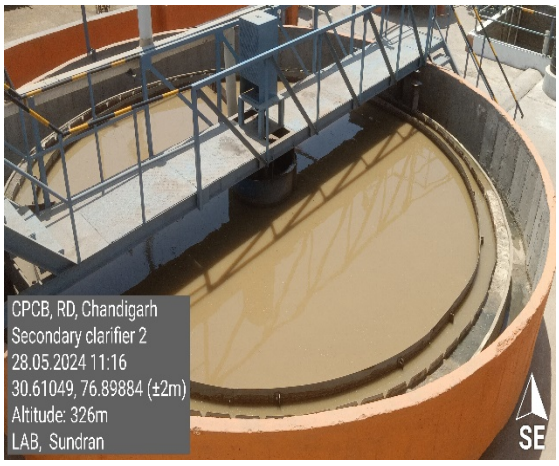
Annexure-1

<table>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>View of Entry gate & Display board of unit</td><td>View of Environmental data display Board</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>View of ETP Process flow diagram (200 KLD)</td><td>View of O&G Trap and Equalization Tank</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>View of Flash Mixture tank</td><td>View of Primary Tube Settler</td></tr>
</table>

View of Aeration Tank 02

View of Aeration Tank 01

View of Secondary Clarifier 01



View of Secondary Clarifier 02

View of Tertiary Settling tank

View of Filter feed tank

Pressure Sand & Activated Carbon Filters

View of RO feed tank

View of two stage R.O. Unit

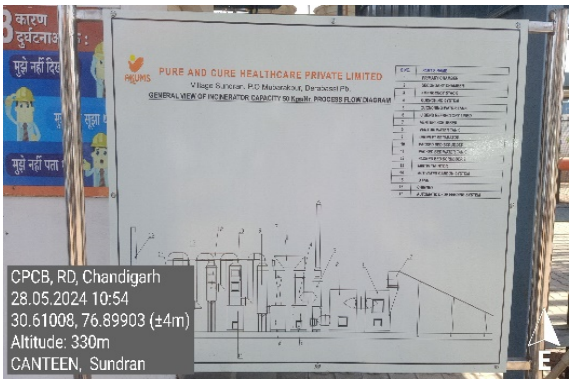
View of RO Permeate tank

View of OCEMS Data

View of Sludge holding tank

Screw Press Machine for sludge dewatering

View of Sludge drying beds



View of IncineratorProcess Flow Diagram

View of Incinerator APCD & stack

View Primary Chamber & Secondary Chamber of Incinerator

	
View of STP process flow diagram	View of Sewage Screening Collection tank, Oil & Grease trap and
	
View of Flow meter at inlet of STP	Pressure sand & Activated Carbon Filters
	

View of Sludge holding tank of STP	View of treated tank of STP (10 KLD)
	
View of Turbo Bioreactor of STP	View Filter Press Outlet Water of STP
	
View of Piezometric well at unit premises	View of Borewell Near the entry gate of unit
	
Borewell at Bahadurgarh village(u/s of unit)	Borewell at Sundran village (d/s of unit)

View of plantation at three locations inside and outside the unit premises

View of Bag Filter

View of Hazardous waste storage room

View of Hazardous waste room for Evaporation Residue

Joint Committee: (As per order of the Hon'ble NGT Principal Bench, New Delhi dated 05.04.2024)

Name & Designation	Organizations /Institutes / Departments	Signature
Dr. Dharmendra Kumar Gupta, Scientist-'F'	Regional Office, Ministry of Environment, Forest and Climate Change (MoEF&CC), Chandigarh (Representative of MoEF&CC)	
Shri Jagdish Prasad Meena, Scientist-'D'	Central Pollution Control Board, Regional Directorate, Chandigarh (Representative of CPCB, RD Chandigarh)	

Item No. 08 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

M.A. No. 70/2023
In
Original Application No. 105/2023

M L Dhiman Applicant

Versus

State of Punjab Respondent

Date of hearing: 05.04.2024

CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Applicant(s): None Present

Respondent(s): Ms. Sunieta Ojha, Adv. with Mr. Gursharan Dass Garg, Environmental Engineer for Punjab PCB
Mr. Bhavya Goyal, Adv. for R - 3

ORDER

1. In this original application, the issue under examination relates to the discharge of the effluents by the project proponent i.e. Respondent No. 3.

2. The Tribunal in the proceedings dated 25.01.2024 had taken note of the report of the Punjab Pollution Control Board (PPCB) dated 22.01.2024 disclosing the decision of the Chairman of the Board to refuse the Consent to Operate (CTO), disconnect electricity and encash Bank Guarantee of Rs. 5 lakhs. The Tribunal also took note of the subsequent decision to temporarily restore the electricity connection of the industry for a period of three months upto 29.02.2024. It is pointed out that the CTO was granted temporarily upto 29.02.2024 subject to certain conditions.

3. The Tribunal had also observed that in the report nothing was reflected as to what prompted the Board to change its earlier decision and permit the project proponent to operate, whereas the conditions while granting the permission upto 29.02.2024 were not fulfilled. In the said background, the Tribunal had directed the PPCB to file a fresh report along with the water balance chart.

4. The report along with water balance chart has been filed and it has been disclosed that the unit was inspected by a Special Committee of PPCB on 13.03.2024 and the observations of the Committee are mentioned in paragraph 5 of the report and observation '(d)' reveals that though the unit has installed new STP plant of 50 MLD for treatment of its domestic effluent, but the same was found to be under stabilization. It has been pointed out that subsequently, the CTO has been granted on 15.03.2024 valid upto 30.06.2024 which also contain the condition of stabilizing the STP within one month, meaning thereby the STP is not yet operational. It is stated that the domestic sewage is being treated in the ETP. But as to how the same is being done, has not been disclosed. It appears that Respondent No. 3 is not complying with all the norms, yet it is being permitted to operate.

5. In the facts and circumstances of the case, we deem it proper to have the report from a Joint Committee. Accordingly, we constitute a Joint Committee comprising of the Regional Officer, Ministry of Environment, Forest and Climate Change (MoEF&CC), Chandigarh and representative of Member Secretary, Central Pollution Control Board (CPCB). The RO, MoEF&CC will be the nodal agency for coordination and compliance. The Joint Committee will visit the site, collect all the information relating to compliance of requisite norms by Respondent No. 3 and submit the report before the Tribunal within six weeks by e-mail

at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.

6. The Environmental Engineer (Authorized Officer on behalf of PPCB) present in person has submitted that the CTO will now be renewed only if the unit complies with all the norms.

7. The reply of the PPCB reflects that during the inspection by the Special Committee on 13.03.2024, it was found as under:

> *"xxx .....xxx.....xxx*
> *e). Presently, discharge of domestic effluent is about 8 KLD, which after treatment is discharged onto land for plantation. The industry has newly developed 02 pockets of plantation area in its premises. The area of which is about 1.2 acres, which is adequate. The industry is in the process of development of another pocket of plantation area of around 01 acres, near its boiler area."*

8. Learned Counsel appearing for Respondent No. 3 submits that no water is discharged from the unit and for plantation purposes fresh water is used. Such a statement runs countered to the finding of the Special Committee as quoted above.

9. List on 15.07.2024.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

April 05, 2024
M.A. No. 70/2023
In Original Application No. 105/2023
DV

Annexure-3

PUNJAB WATER REGULATION AND DEVELOPMENT AUTHORITY
SCO 149-152, SECTOR 17, CHANDIGARH – 160017

PERMISSION FOR EXTRACTION OF GROUNDWATER

(Under The Punjab Groundwater Extraction And Conservation Directions, 2023)

Unit ID	Permission Number	Date of Grant of Permission	Valid up to
20230100676	GW/PWRDA/05/2024/L2/156	15-May-2024	14-May-2027

1	**Name of Unit**	PURE AND CURE HEALTHCARE PRIVATE LIMITED	
2	**Activity of Unit**	Industrial	
3	**Address/Location of Unit**	Village Sundran, Mubarakpur, Tehsil Derabassi, District SAS Nagar,	
		Sundran (363)	PIN: 140201
4	**Assessment Area(Block)**	DERA BASSI	Status: YELLOW
5	**District**	S.A.S Nagar	
6	**Head Office Address**	Village Sundran, Mubarakpur, Tehsil Derabassi, District SAS Nagar	
		S.A.S Nagar, PUNJAB	PIN: 140201
	Email	himanshu.saxena@akums.in	
	Phone/Mobile No.	8859000568	
7	**Project Status**	Existing : 01-06-2021	
8	**No. of Existing Tube-Wells**	**No. of Proposed Tube-Wells**	**Total Number of Tube-Wells Permitted**
	2	0	2
9	**Volume of Ground Water Permitted to be Extracted (m3/month)**	**Fresh**	**Brackish/Saline**
		10500	0

Note: This permission is granted in terms of the Punjab Groundwater Extraction and Conservation Directions, 2023 notified on 27th January, 2023 under section 15 of the Punjab Water Resources (Management and Regulation) Act, 2020 and is subject to the conditions given overleaf.

For Pure and Cure Healthcare Private Limited

Auth. Signatory

Digitally signed by MANINDER SINGH
Reason: Approval
Location Chandigarh
Date 15-05-2024 15:57:56 PM

Designation : A.O.L-2

Annexure-4

PUNJAB POLLUTION CONTROL BOARD

Zonal Office-1, Vatavaran Bhawan, Nabha Road, Patiala – 147001

Website:- www.ppcb.gov.in

Office Dispatch No : **Registered/Speed Post** **Date:**

Industry Registration ID: *R12SAS21124* **Application No :** *25546692*

To,

Vinayak Bhat
Village Sundran, Derabassi
Derabassi,Mohali-140507

Subject: **Renewal of consent to operate granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974**

1. Particulars of Consent to Operate under Water Act, 1974 granted to the industry

Consent to Operate Certificate No.	*CTOW/Renewal/SAS/2024/25546692*
Date of issue :	*28/06/2024*
Date of expiry :	*31/12/2024*
Certificate Type :	*Renewal*
Previous CTO No. & Validity :	*CTOW/Fresh/PBIP/SAS/2024/2403313855* *From:15/03/2024 To:30/06/2024*

2. Particulars of the Industry

Name & Designation of the Applicant	*Vinayak Bhat, (Vp-operation)*
Address of Industrial premises	*Pure And Cure Healthcare Private Limited,* *Village: Sundran, Mubarakpur,* *Derabassi,Sas Nagar-140507*
Capital Investment of the Industry	*24175.0 lakhs*
Category of Industry	*Red*
Type of Industry	*Drugs and Pharmaceuticals*
Scale of the Industry	*Large*
Office District	*Sas Nagar*

All the term and conditions same as mentioned in the consent no. CTOW/Fresh/PBIP/SAS/2024/2403313855 dated 15/3/2024 (valid upto 30/6/2024), is hereby extended upto 31/12/2024. This extension letter may be appended with the original consent letter issued to the industry and subsequent extension letters and additional conditions that:

1) This consent is being issued to the industry subject to the orders/judgment of Hon'ble NGT in the matter of M.A. No. 70/2023 in O.A no. 105/2023 titled as M.L Dhiman v/s State of Punjab. The industry shall be bound to comply with directions/orders issued by Hon'ble NGT in this matter.

2) The industry shall operate and maintain its STP, ETP, MEE and ATFD properly, at the times.

3) The industry shall comply with the conditions of the Environmental Clearance granted by SEIAA under the EIA notification dated 14/9/2006.

4) The industry shall stick to the water balance submitted alongwith the online application form.

5) The industry shall reuse the entire RO Permeate back into its process and shall adhere to ZLD, at all times.

6) The industry shall use only treated domestic effluent after STP, onto land for plantation within its premises.

7) The industry shall ensure that no problem related to air and water pollution is being caused by the unit due to its operation and no public complaints are received by the Board in this regard.

8) The industry shall not discharge any effluent at any unauthorized place by any unauthorized means i.e. shall not discharge any wastewater outside its premises or in any drain/ inland surface waters/ drain/ choe/nallah / onto land for stagnation or outside its premises, at any time, under any circumstances.

9) The industry has been approved by the Board from pollution angle and the industry shall obtain the statutory clearances / permissions from all other concerned departments.

10) The adequacy/ efficacy of the pollution control arrangements shall be the sole responsibility of the industry and the industry shall be bound to implement/ upgrade its pollution control arrangements as per the discretion of the Board to achieve the prescribed emission/ effluent standards, as amended from time to time.

11) The industry shall ensure the compliance of provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and/ or any other environmental law applicable to him and Rules, Circulars & Directions issued by the Board from time to time.

12) This consent to operate is being issued to the project proponent based upon the documents/ information submitted by it along with the online application form. The Board would be at liberty to take penal action against the industry its responsible/ concerned person(s) in case information/ document is detected as incorrect/ false/ misleading at any point of time, without any opportunity of Personal Hearing.

13) In case the project proponent fails to comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and/ or any other environmental law applicable to the project and Rules, Circulars & Directions issued by the Board from time to time, action as deemed fit shall be taken against the industry.

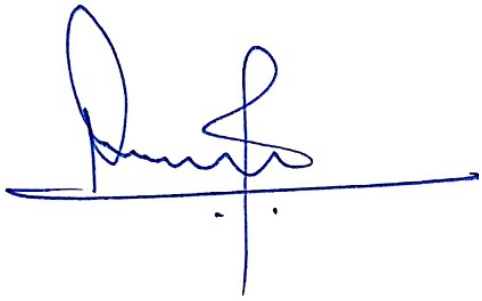
14) The industry shall devise the ways & means to minimize the generation of all kind of wastes through REDUCE, REUSE and RECYCLE activities. The generated waste, if any, shall be properly handled and managed as per the provisions of the Municipal Solid Waste Rules 2016 in an environmentally sound manner.

15) The industry shall develop the vermicomposting/ composting to manage the biodegradable solid waste. The indsutry not throw, burn or bury any solid wastes in open, outside premises or in drain/ water bodies.

16) The industry shall ensure that there are no usages of plastic carry bags and single use plastic/ thermocol disposable items such as water bottles/ water pouches/ water cups, plates, forks, spoons, straw etc. and single use decorating material made of plastic-thermocol or any other non-biodegradable material in the premises.

17) The industry shall perform/ promote its Corporate Environment Responsibility (CER) activities as well as use of alternatives of single use plastics (SUP) and awareness to discourage use of plastic.

18) The industry shall carry out awareness and activities for the themes/ action points identified under Mission LiFE (Lifestyle for the Environment) by Ministry of Environment, Forests and Climate Change given at the website (http://missionlife-moefcc.nic.in).



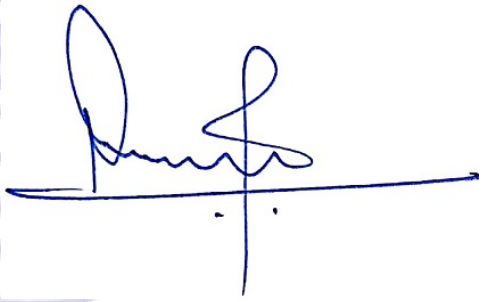
28/06/2024

(Rajeev Gupta)
Environmental Engineer
For & on behalf
of
(Punjab Pollution Control Board)

Endst. No.: **Dated:**

A copy of the above is forwarded to the following for information and necessary action please:

1) Environmental Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar



28/06/2024

(Rajeev Gupta)
Environmental Engineer
For & on behalf
of
(Punjab Pollution Control Board)

PUNJAB POLLUTION CONTROL BOARD

Zonal Office-1, Vatavaran Bhawan, Nabha Road, Patiala – 147001

Website:- www.ppcb.gov.in

Office Dispatch No :	**Registered/Speed Post**	**Date:**	
Industry Registration ID:	*R12SAS21124*	**Application No :**	*25546676*

To,

Vinayak Bhat
Village Sundran, Derabassi
Derabassi,Mohali-140507

Subject: **Renewal of consent to operate granted under section 21 of the Air (Prevention & Control of Pollution) Act, 1981**

1. Particulars of Consent to Operate under Air Act, 1981 granted to the industry

Consent to Operate Certificate No.	*CTOA/Renewal/SAS/2024/25546676*
Date of issue :	*28/06/2024*
Date of expiry :	*31/12/2024*
Certificate Type :	*Renewal*
Previous CTO No. & Validity :	*CTOA/Fresh/PBIP/SAS/2024/2403247012* *From:15/03/2024 To:30/06/2024*

2. Particulars of the Industry

Name & Designation of the Applicant	*Vinayak Bhat, (Vp-operation)*
Address of Industrial premises	*Pure And Cure Healthcare Private Limited,* *Village: Sundran, Mubarakpur,* *Derabassi,Sas Nagar-140507*
Capital Investment of the Industry	*24175.0 lakhs*
Category of Industry	*Red*
Type of Industry	*Drugs and Pharmaceuticals*
Scale of the Industry	*Large*
Office District	*Sas Nagar*

All the term and conditions same as mentioned in the consent no. CTOA/Fresh/PBIP/SAS/2024/2403247012 dated 15/3/2024 (valid upto 30/6/2024), is hereby extended upto 31/12/2024. This extension letter may be appended with the original consent letter issued to the industry and subsequent extension letters and additional conditions that:

1) This consent is being issued to the industry subject to the orders/judgment of Hon'ble NGT in the matter of M.A. No. 70/2023 in O.A no. 105/2023 titled as M.L Dhiman v/s State of Punjab. The industry shall be bound to comply with directions/orders issued by Hon'ble NGT in this matter.

2) The industry shall operate and maintain its STP, ETP, MEE and ATFD properly, at the times.

3) The industry shall comply with the conditions of the Environmental Clearance granted by SEIAA under the EIA notification dated 14/9/2006.

4) The industry shall stick to the water balance submitted alongwith the online application form.

5) The industry shall reuse the entire RO Permeate back into its process and shall adhere to ZLD, at all times.

6) The industry shall use only treated domestic effluent after STP, onto land for plantation within its premises.

7) The industry shall ensure that no problem related to air and water pollution is being caused by the unit due to its operation and no public complaints are received by the Board in this regard.

8) The industry shall not discharge any effluent at any unauthorized place by any unauthorized means i.e. shall not discharge any wastewater outside its premises or in any drain/ inland surface waters/ drain/ choe/nallah / onto land for stagnation or outside its premises, at any time, under any circumstances.

9) The industry has been approved by the Board from pollution angle and the industry shall obtain the statutory clearances / permissions from all other concerned departments.

10) The adequacy/ efficacy of the pollution control arrangements shall be the sole responsibility of the industry and the industry shall be bound to implement/ upgrade its pollution control arrangements as per the discretion of the Board to achieve the prescribed emission/ effluent standards, as amended from time to time.

11) The industry shall ensure the compliance of provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and/ or any other environmental law applicable to him and Rules, Circulars & Directions issued by the Board from time to time.

12) This consent to operate is being issued to the project proponent based upon the documents/ information submitted by it along with the online application form. The Board would be at liberty to take penal action against the industry its responsible/ concerned person(s) in case information/ document is detected as incorrect/ false/ misleading at any point of time, without any opportunity of Personal Hearing.

13) In case the project proponent fails to comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and/ or any other environmental law applicable to the project and Rules, Circulars & Directions issued by the Board from time to time, action as deemed fit shall be taken against the industry.

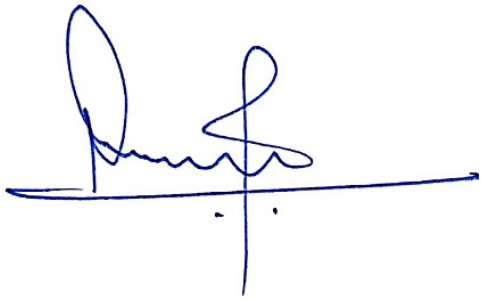
14) The industry shall devise the ways & means to minimize the generation of all kind of wastes through REDUCE, REUSE and RECYCLE activities. The generated waste, if any, shall be properly handled and managed as per the provisions of the Municipal Solid Waste Rules 2016 in an environmentally sound manner.

15) The industry shall develop the vermicomposting/ composting to manage the biodegradable solid waste. The indsutry not throw, burn or bury any solid wastes in open, outside premises or in drain/ water bodies.

16) The industry shall ensure that there are no usages of plastic carry bags and single use plastic/ thermocol disposable items such as water bottles/ water pouches/ water cups, plates, forks, spoons, straw etc. and single use decorating material made of plastic-thermocol or any other non-biodegradable material in the premises.

17) The industry shall perform/ promote its Corporate Environment Responsibility (CER) activities as well as use of alternatives of single use plastics (SUP) and awareness to discourage use of plastic.

18) The industry shall carry out awareness and activities for the themes/ action points identified under Mission LiFE (Lifestyle for the Environment) by Ministry of Environment, Forests and Climate Change given at the website (http://missionlife-moefcc.nic.in).



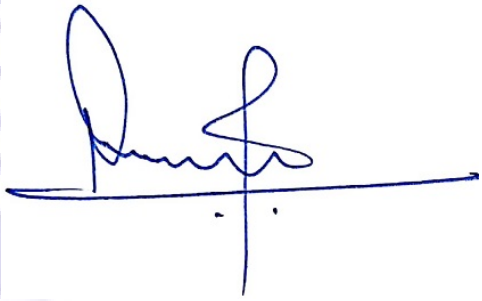
28/06/2024

(Rajeev Gupta)
Environmental Engineer
For & on behalf
of
(Punjab Pollution Control Board)

Endst. No.: **Dated:**

A copy of the above is forwarded to the following for information and necessary action please:

1) Environmental Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar



28/06/2024

(Rajeev Gupta)
Environmental Engineer
For & on behalf
of
(Punjab Pollution Control Board)

Annexure-5

PUNJAB POLLUTION CONTROL BOARD

Zonal Office-1, Vatavaran Bhawan, Nabha Road, Patiala – 147001

Website:- www.ppcb.gov.in

LiFE Lifestyle for Environment

Office Dispatch No :	**Registered/Speed Post**	**Date:**
Industry Registration ID :	*R12SAS21124*	**Application No :** *25546708*

To,

Vinayak Bhat
Village Sundran, Derabassi
Derabassi,Mohali-140507

Subject: **Renewal of Authorization for operating a facility for Collection, Generation, Storage, Transportation, Recovery, Treatment, Disposal, Incineration, of Hazardous Wastes as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 .**

1. Particulars of Authorization granted to the Industry

Authorization No	*HWM/renew/SAS/2024/25546708*
Previous Authorization No	*HWM/Auth/PBIP/SAS/2023/2306878133*
Date of issue :	*04/07/2024*
Date of expiry :	*31/12/2024*
Previous Authorization Date of Issue :	*18/04/2024*
Previous Authorization Date of Expiry :	*30/06/2024*
Authorization Type :	*renew*

2. Particulars of the Industry

Name & Designation of the Applicant	*Vinayak Bhat, (VP-Operation)*
Address of Industrial premises	*Pure and cure healthcare private limited, Village: sundran, mubarakpur, Derabassi,Sas nagar-140507*
Capital Investment of the Industry	*24175.0 lakhs*
Category of Industry	*Red*
Type of Industry	*Drugs and Pharmaceuticals*
Scale of the Industry	*Large*
Office District	*Sas nagar*

3. Terms and Conditions

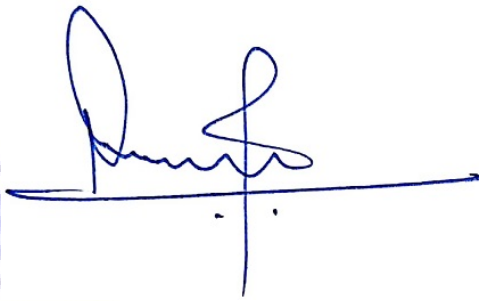
All the term and conditions same as mentioned in the authoriation no. HWM/Fresh/PBIP/2024/2403114435 dated 18/4/2024 (valid upto 30/6/2024), is hereby extended upto 31/12/2024. This extension letter may be appended with the original authorization letter issued to the industry and subsequent extension letters and additional conditions that:
1) The industry shall comply with the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, at all times.

2) The industry shall not generate any other category of hazardous waste in its premise, except the hazardous wastes mentioned in this authorization.

3) The industry shall keep proper record of incineration of hazardous waste of different categories, at all times.

4) The industry shall submit record of manifests of lifting of hazardous waste in form 10, as per the provisions of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

5) The industry shall not dispose any of the hazardous waste through any un-authorized/legal mode, at any point of time.



04/07/2024

(Rajeev Gupta)
Environmental Engineer

For & on behalf

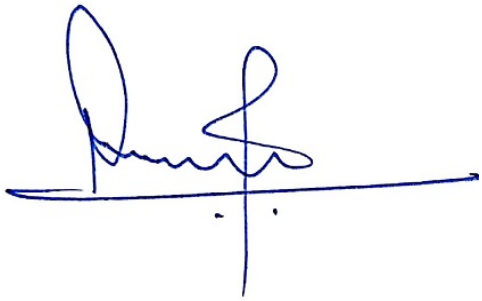
of

(Punjab Pollution Control Board)

Endst. No.: **Dated:**

A copy of the above is forwarded to the following for information and necessary action please:

1) Environmental Engineer, Punjab Pollution Control Board, Regional Office, SAS Nagar



04/07/2024

(Rajeev Gupta)
Environmental Engineer

For & on behalf

of

(Punjab Pollution Control Board)

Annexure-6

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000063F

Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **WATER/WW/2425/SR00031, 28/05/2024**	Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **WATER/2425/WW/00063,21/06/2024**
Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**	Report sent to (Name & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **RD Chandigarh**
Sample Details नमूना विवरण	: **ETP**	Sample Matrix नमूना मैट्रिक्स	: **Waste Water**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024 12:35 PM**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **29/04/2024 to 14/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**		

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	pH	COD	BOD	TSS	TDS	Cond.	PO4-P	NH3-N
1	28/05/2024	AE-01	7.1	4187	2360	322	7072	-	BDL	207.76
2	28/05/2024	AE-03	8.4	1409	870	266	1840	-	0.16	985.6
3	28/05/2024	AE-04	9.4	283	112	BDL	332	1028	BDL	129.36

BDL : Below Deduction Limit कटौती सीमा से नीचे

Remarks (if any) : , , ,

Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm). नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं ।

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000063F

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	Cr6+	Boron	Oil & Grease
1	28/05/2024	AE-01	BDL	-	BDL
2	28/05/2024	AE-03	BDL	-	BDL
3	28/05/2024	AE-04	BDL	BDL	BDL

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000063F

Statement कथन :

1. The results relate only to the samples tested. परिणाम केवल जांचे गए नमूनों से संबंधित है।
2. The report shall not be reproduced except in full without written approval of the laboratory पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी ।
3. BDL & Test methods are mentioned on back side of this report. बी डी एल एवं परीक्षण विधि आख्या के अंत में दिए गए हैं।
4. Samples will be retained only for one Week after receipt of Report. संबंधित आख्या जारी होने के बाद नमूने केवल प्राप्ति के एक सप्ताह बाद तक ही सुरक्षित रखे जाएंगे।

*** END OF REPORT आख्या समाप्ति ***

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
pH	APHA 4500 H+ - B, 23rd Ed.: 2017		2	
COD	APHA 5220 B, 23rd Ed.: 2017	mg/l	5	
BOD	APHA 5210 B, 23rd Ed. 2017, 4500 OC (5 days at 20C). IA - 3025 part 44: 1993 BOD (3 days at 27 C): 2017	mg/l	1	
TSS	APHA 2540 D, 23rd Ed.: 2017	mg/l	10	
TDS	APHA 2540 C, 23rd Ed.: 2017	mg/l	10	
Cond.	APHA 2510 - B, 23rd Ed.: 2017	µS/cm	1	
PO4-P	APHA 4500 - PD, 23rd Ed.: 2017	mg/l	0.05	
NH3-N	APHA 4500 NH3-N- B & C, 23rd Ed.: 2017	mg/l	1	
Cr6+	APHA 3500 - Cr B, 23rd Ed.: 2017	mg/l	0.1	
Boron	34500 - BC Carmine Methdo. 23rd Ed.: 2017	mg/l	01	
Oil & Grease	APHA 5520 B, 23rd Ed.: 2017	mg/l	5	

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **WATER/WW/2425/SR00031, 28/05/2024**	Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **WATER/2425/WW/00063,21/06/2024**
Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**	Report sent to (Name & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **RD Chandigarh**
Sample Details नमूना विवरण	: **ETP**	Sample Matrix नमूना मैट्रिक्स	: **Waste Water**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024 12:35 PM**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **29/04/2024 to 14/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**		

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	Phenolic compounds	MLSS	MLVSS	SAR	S2−
1	28/05/2024	AE-01	0.58	-	-	-	2
2	28/05/2024	AE-03	0.55	-	-	-	BDL
3	28/05/2024	AE-04	0.53	-	-	2	BDL
4	28/05/2024	AE-02	-	9723	4660	-	-

BDL : Below Deduction Limit कटौती सीमा से नीचे

Remarks (if any) : , , ,

Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm). नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं ।

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

Statement कथन :

1. The results relate only to the samples tested. परिणाम केवल जांचे गए नमूनों से संबंधित है।
2. The report shall not be reproduced except in full without written approval of the laboratory पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी ।
3. BDL & Test methods are mentioned on back side of this report. बी डी एल एवं परीक्षण विधि आख्या के अंत में दिए गए हैं।
4. Samples will be retained only for one Week after receipt of Report. संबंधित आख्या जारी होने के बाद नमूने केवल प्राप्ति के एक सप्ताह बाद तक ही सुरक्षित रखे जाएंगे।

*** END OF REPORT आख्या समाप्ति ***

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
Phenolic compounds	5530 D Direct Photometric Method, 23d Ed.: 2017	mg/l	0.1	
MLSS	APHA 2540 D, 23rd Ed.: 2017	mg/l	10	
MLVSS	APHA 2540 D, 23rd Ed.: 2017	mg/l	10	
SAR				
S2–	4500 S2- F Iodometric method, 23rd Ed.: 2017	mg/l	1	

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड

HEAD OFFICE - DELHI

Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC772324300000044F

Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **INSTR/2425/HM/00044,19/06/2024**	Report sent to (Name,Mobile no. & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **DH of RD Chandigarh**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024**
Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **INSTR/HM/2425/SR00037, 28/05/2024**	Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **10/06/2024 to 10/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**	Sample Details नमूना विवरण	: **ETP**

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	Sample Matrix नमूना मैट्रिक्स	Arsenic	Chromium	Copper	Lead	Zinc
1	28/05/2024	AE-01	Waste Water	0.016	0.054	0.039	BDL	0.381
2	28/05/2024	AE-03	Waste Water	0.019	0.01	0.008	BDL	0.267
3	28/05/2024	AE-04	Waste Water	BDL	0.008	BDL	BDL	0.133

*** END OF REPORT आख्या समाप्ति ***

BDL : Below Deduction Limit न्यूनतम विश्लेषण की सीमा

Remarks (if any) :

Statement :

1. The results relate only to the samples tested
2. The report shall not be reproduced except in full. without the written approval of the laboratory.
3. The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
4. The sample will be retained for 30 days from the date of issue of test report.

Analyst	Supervisor & Reviewer	Approved By (DH Inst-Lab)
Maneesh N	Yogita Kharayat	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड

HEAD OFFICE - DELHI

Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश लेषण आख्या)

TC-7723

Heavy Metals(Excluding Mercury)

ULR No: TC772324300000044F

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
Arsenic	APHA, ICP-OES, 3120-B, 24th Edition, 2023	mg/L	0.015	
Chromium	APHA, ICP-OES, 3120-B, 24th Edition, 2023	mg/L	0.0033	
Copper	APHA, ICP-OES, 3120-B, 24th Edition, 2023	mg/L	0.006	
Lead	APHA, ICP-OES, 3120-B, 24th Edition, 2023	mg/L	0.006	
Zinc	APHA, ICP-OES, 3120-B, 24th Edition, 2023	mg/L	0.0106	

Analyst	Supervisor & Reviewer	Approved By (DH Inst-Lab)
Maneesh N	Yogita Kharayat	Dr. K. Ranganathan

Annexure-7

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000062F

Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **WATER/WW/2425/SR00035, 29/05/2024**	Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **WATER/2425/WW/00062,21/06/2024**
Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**	Report sent to (Name & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **RD Chandigarh**
Sample Details नमूना विवरण	:	Sample Matrix नमूना मैट्रिक्स	: **Waste Water**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024 12:35 PM**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **29/05/2024 to 14/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**		

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	pH	COD	BOD	TSS	TDS	Cl−	NO2-N	NO3- N
1	28/05/2024	AS-01	7	207	107	65	156	61	0.07	BDL
2	28/05/2024	AS-03	7.6	88	9	27	420	137	1.05	13.72

BDL : Below Deduction Limit कटौती सीमा से नीचे

Remarks (if any) : , , ,

Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm). नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं ।

Statement कथन :

1. The results relate only to the samples tested. परिणाम केवल जांचे गए नमूनों से संबंधित है।
2. The report shall not be reproduced except in full without written approval of the laboratory पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी ।
3. BDL & Test methods are mentioned on back side of this report. बी डी एल एवं परीक्षण विधि आख्या के अंत में दिए गए हैं।
4. Samples will be retained only for one Week after receipt of Report. संबंधित आख्या जारी होने के बाद नमूने केवल प्राप्ति के एक सप्ताह बाद तक ही सुरक्षित रखे जाएंगे।

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000062F

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	NH3-N	Boron
1	28/05/2024	AS-01	43.12	-
2	28/05/2024	AS-03	16.8	0.02

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000062F

*** END OF REPORT आख्या समाप्ति ***

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
pH	APHA 4500 H+ - B, 23rd Ed.: 2017		2	
COD	APHA 5220 B, 23rd Ed.: 2017	mg/l	5	
BOD	APHA 5210 B, 23rd Ed. 2017, 4500 OC (5 days at 20C). IA - 3025 part 44: 1993 BOD (3 days at 27 C): 2017	mg/l	1	
TSS	APHA 2540 D, 23rd Ed.: 2017	mg/l	10	
TDS	APHA 2540 C, 23rd Ed.: 2017	mg/l	10	
Cl–	APHA 4500 - Cl B, 23rd Ed.: 2017	mg/l	5	
NO2-N	APHA 4500 - NO2, B 23rd Ed., 2017	mg/l	0.01	
NO3- N	APHA 4500 - NO3 D 23rd Ed.: 2017	mg/l	0.5	
NH3-N	APHA 4500 NH3-N- B & C, 23rd Ed.: 2017	mg/l	1	
Boron	34500 - BC Carmine Methdo. 23rd Ed.: 2017	mg/l	01	

Analyst	**Supervisor & Reviewer**	**Approved By (Lab InCharge)**
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **WATER/WW/2425/SR00035, 29/05/2024**	Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **WATER/2425/WW/00062,21/06/2024**
Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**	Report sent to (Name & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **RD Chandigarh**
Sample Details नमूना विवरण	:	Sample Matrix नमूना मैट्रिक्स	: **Waste Water**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024 12:35 PM**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **29/05/2024 to 14/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**		

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	F−	MLSS	MLVSS	TKN	SAR
1	28/05/2024	AS-02	-	7034	4366	-	-
2	28/05/2024	AS-01	0.7	-	-	50.85	2
3	28/05/2024	AS-03	0.7	-	-	25.2	2

BDL : Below Deduction Limit कटौती सीमा से नीचे

Remarks (if any) : , , ,

Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm). नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं ।

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Waste Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

Statement कथन :

1. The results relate only to the samples tested. परिणाम केवल जांचे गए नमूनों से संबंधित है।
2. The report shall not be reproduced except in full without written approval of the laboratory पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी ।
3. BDL & Test methods are mentioned on back side of this report. बी डी एल एवं परीक्षण विधि आख्या के अंत में दिए गए हैं।
4. Samples will be retained only for one Week after receipt of Report. संबंधित आख्या जारी होने के बाद नमूने केवल प्राप्ति के एक सप्ताह बाद तक ही सुरक्षित रखे जाएंगे।

*** END OF REPORT आख्या समाप्ति ***

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
F–	APHA 4500 - F D, 23rd Ed.: 2017	mg/l	0.20	
MLSS	APHA 2540 D, 23rd Ed.: 2017	mg/l	10	
MLVSS	APHA 2540 D, 23rd Ed.: 2017	mg/l	10	
TKN	4500 Inorganic B Macro kjeldahl method, 23rd Ed.: 2017	mg/l	1	
SAR				

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Vijay Laxmi , Anil P	Syed M Bilal	Dr. K. Ranganathan

केंद्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD

HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

जैव-विज्ञान प्रयोगशाला BIO-SCIENCE LABORATORY

Microbiological Analysis Report

यूएलआर नंबर ULR No: TC772324200000048F

1.	रिपोर्ट संख्या और जारी करने की तारीख Report No. & Date of Issue	: BIO/2425/MB/00048,02/07/2024
2.	रिपोर्ट भेज दी गई है (मांगकर्ता का नाम, मोबाइल नंबर और पता) Report Sent To (Name,Mobile no. & Address of Indentor)	: DH of RD Chandigarh
3.	नमूने पंजीकरण संख्या और दिनांक Samples Registration No. & Date	: BIO/MB/2425/SR00053,29/05/2024
4.	विश्लेषण अनुरोध प्रभाग/संगठन Analysis Request Division/Organization	: RD Chandigarh
5.	एकत्रित किया गया नमूना Sample Collected by	: J. P. Meena,
6.	नमूनाकरण योजना प्राथमिकता Sampling Plan Reference	:
7.	नमूना प्राप्ति की तिथि एवं समय Date & Time of Sample Receipt	: 29/05/2024 13:31 PM
8.	नमूना विश्लेषण अवधि Sample Analysis Period	: 29/05/2024 31/05/2024
9.	नमूना विवरण Sample Details	:
10.	परियोजना का नाम Name of the Project	: In compliance of NGT order O.A No 105 of 2023
11.	रिपोर्ट स्थिति Report Status	: Final

SR. NO	Field Code	Sample Matrix	Date & Time of Sample Collection	Parameters	Result value	Unit
1	AS-01	Waste Water	28-05-2024 17:52	Faecal Coliform	49*10^7	MPN/100mL
2	AS-01	Waste Water	28-05-2024 17:52	Total Coliform	94*10^7	MPN/100 mL
3	AS-03	Waste Water	28-05-2024 17:52	Faecal Coliform	49*10^2	MPN/100mL
4	AS-03	Waste Water	28-05-2024 17:52	Total Coliform	13*10^3	MPN/100 mL

*** END OF REPORT आख्या समाप्ति ***

Remarks (if any) :

Statement :

1.परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं |
The results relate only to the samples tested

2.पूरी रिपोर्ट को छोड़कर दोबारा प्रस्तुत नहीं किया जाएगा। सीपीसीबी के सक्षम प्राधिकारी की लिखित मंजूरी के बिना।
The report shall not be reproduced except in full. without the written approval of the Competent authority of CPCB.

3.इस परीक्षण रिपोर्ट के जारी होने की तारीख से एक सप्ताह तक नमूना रखा जाएगा।
The sample will be retained for one week from the date of issue of this test report.

4. डिटेक्शन लिमिट से नीचे (बीडीएल) <1.8 एमपीएन/100 एमएल इंगित करता है |
Below Detection Limit (BDL) indicates <1.8 MPN/100 mL

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
Faecal Coliform	APHA, 24th Ed., 9221-E	MPN/100mL		70-440 MPN\100mL @220 MPN\100mL
Total Coliform	APHA, 24th Ed.,9221-A,B,C	MPN/100 mL		100-710 MPN\100mL @280 MPN\100mL

Analyst	Supervisor, Reviewer & Authorized signatory	DH Bioscience Laboratory
Dr. Jaya Sharma	V. Himajwala	Dr. Z. Changsan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Fresh Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000067F

Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **WATER/FW/2425/SR00035, 29/05/2024**	Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **WATER/2425/FW/00067,02/07/2024**
Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**	Report sent to (Name & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **RD Chandigarh**
Sample Details नमूना विवरण	: **Ground water**	Sample Matrix नमूना मैट्रिक्स	: **Fresh Water**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024 14:36 PM**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **29/05/2024 to 04/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**		

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	pH	COD	BOD	TDS	Cl−	TA	Mg2+	TH
1	28/05/2024	AW-02	7.5	25	5	426	30	299	5	180
2	28/05/2024	BW-02	7.7	3	BDL	384	13	312	12	215
3	28/05/2024	BW-03	7.5	2	BDL	390	10	323	12	229
4	28/05/2024	BW-04	7.6	1	BDL	380	16	295	9	208

BDL : Below Deduction Limit कटौती सीमा से नीचे

Remarks (if any) : , , , , ,

Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm). नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं ।

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Pravin Kumar Gupta , Atul Sharma , Inder Mohan	B. Sasi Devi	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Fresh Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000067F

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	Ca2+	NO3- N	NH3-N	F−	Na+	K+
1	28/05/2024	AW-02	64	BDL	1.38	0.29	53	1.95
2	28/05/2024	BW-02	67	BDL	0.83	0.2	50	1.49
3	28/05/2024	BW-03	72	0.73	1.42	0.25	31	1.31
4	28/05/2024	BW-04	69	1.08	1.16	0.22	47	1.52

Analyst
Pravin Kumar Gupta , Atul Sharma , Inder Mohan

Supervisor & Reviewer
B. Sasi Devi

Approved By (Lab InCharge)
Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Fresh Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

ULR No: TC772324500000067F

Statement कथन :

1. The results relate only to the samples tested. परिणाम केवल जांचे गए नमूनों से संबंधित है।
2. The report shall not be reproduced except in full without written approval of the laboratory पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी ।
3. BDL & Test methods are mentioned on back side of this report. बी डी एल एवं परीक्षण विधि आख्या के अंत में दिए गए हैं।
4. Samples will be retained only for one Week after receipt of Report. संबंधित आख्या जारी होने के बाद नमूने केवल प्राप्ति के एक सप्ताह बाद तक ही सुरक्षित रखे जाएंगे।

*** END OF REPORT आख्या समाप्ति ***

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
pH	APHA 4500 H+ - B, 23rd Ed.: 2017		2	
COD	APHA 5220 B, 23rd Ed.: 2017	mg/l	2	
BOD	APHA 5210 B, 23rd Ed. 2017, 4500 OC, (5 days at 20°C). IS-3025 part 44:1993 BOD (3 days at 27°C).	mg/l		
TDS	APHA 2540 C, 23rd Ed.: 2017	mg/l	5	
Cl–	APHA 4500 - Cl B, 23rd Ed.: 2017	mg/l	2	
TA	2320 B Titration Method, 23rd Ed.: 2017	mg/l	5	
Mg2+	APHA 3500 - Mg B, 23rd Ed.: 2017	mg/l	2	
TH	APHA 2340 C, 23rd Ed.: 2017	mg/L	5	
Ca2+	2340 EDTA Titrimetric method, 23rd Ed.: 2017	mg/l	2	
NO3- N	APHA 4500 - NO3 B, 23rd Ed.: 2017	mg/l	0.5	
NH3-N	IS: 3025 (Part - 34): 1988	mg/l	0.3	
F–	APHA 4500 - F D, 23rd Ed.: 2017	mg/l	0.2	
Na+	APHA 3500 Na - B, 23rd Ed., 2017	mg/l	1	
K+	APHA 3500 K - B, 23rd Ed., 2018	mg/l	1	

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Pravin Kumar Gupta , Atul Sharma , Inder Mohan	B. Sasi Devi	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड

HEAD OFFICE - DELHI

Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Fresh Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **WATER/FW/2425/SR00035, 29/05/2024**	Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **WATER/2425/FW/00067,02/07/2024**
Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**	Report sent to (Name & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **RD Chandigarh**
Sample Details नमूना विवरण	: **Ground water**	Sample Matrix नमूना मैट्रिक्स	: **Fresh Water**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024 14:36 PM**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **29/05/2024 to 04/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**		

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	SO□²□	Phenolic compounds	Color	Turbidity	Boron	S2−
1	28/05/2024	AW-02	16	BDL	BDL	14	1.62	BDL
2	28/05/2024	BW-02	12	0.17	BDL	1	19.27	BDL
3	28/05/2024	BW-03	7	0.19	BDL	7	26.73	BDL
4	28/05/2024	BW-04	10	0.1	BDL	1	1.26	0.8

BDL : Below Deduction Limit कटौती सीमा से नीचे

Remarks (if any) : , , , , ,

Note: All the concentrations are expressed in mg/l except pH and Conductivity (µmho/cm). नोट : पीएच तथा चालकता (µmho/cm) के अतिरिक्त सभी सांद्रता मिग्रा/ली. में व्यक्त की गई हैं ।

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Pravin Kumar Gupta , Atul Sharma , Inder Mohan	B. Sasi Devi	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

Water Laboratory (ANALYSIS REPORT) जल प्रयोगशाला (विश लेषण आख्या)

Fresh Water Samples for Physico-Chemical Analysis Report भौतिक-रासायनिक विश्लेषण रिपोर्ट के लिए नमूने

Statement कथन :

1. The results relate only to the samples tested. परिणाम केवल जांचे गए नमूनों से संबंधित है।
2. The report shall not be reproduced except in full without written approval of the laboratory पूर्ण रिपोर्ट के अतिरिक्त प्रयोगशाला के लिखित अनुमोदन के बिना आख्या की आंशिक प्रतिकृति नहीं की जायेगी ।
3. BDL & Test methods are mentioned on back side of this report. बी डी एल एवं परीक्षण विधि आख्या के अंत में दिए गए हैं।
4. Samples will be retained only for one Week after receipt of Report. संबंधित आख्या जारी होने के बाद नमूने केवल प्राप्ति के एक सप्ताह बाद तक ही सुरक्षित रखे जाएंगे।

*** END OF REPORT आख्या समाप्ति ***

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
SO_4^{2-}				
Phenolic compounds	5530 D Direct Photometric Method, 23d Ed.: 2017	mg/l	0.1	
Color	APHA 2120 C Spectrophotometric Method, 23rd Ed.: 2017	Hazen	5	
Turbidity	2130 B Nephlometric Method, 23rd Ed.: 2017	NTU	1	
Boron	34500 - BC Carmine Methdo. 23rd Ed.: 2017	mg/l	01	
S2–	4500 S2- F Iodometric method, 23rd Ed.: 2017	mg/l	1	

Analyst	Supervisor & Reviewer	Approved By (Lab InCharge)
Pravin Kumar Gupta , Atul Sharma , Inder Mohan	B. Sasi Devi	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC772324300000028F

Report No. & Date of Issue आख्या सं एवं जारी करने की तिथि	: **INSTR/2425/HM/00028,11/06/2024**	Report sent to (Name,Mobile no. & Address of Indentor) आख्या किसे जारी की गयी (नाम एवं प्रभाग)	: **DH of RD Chandigarh**
Sample Collected by नमूने एकत्रित करने वाले का नाम	: **J. P. Meena,**	Date & Time of Sample Receipt नमूने प्राप्ति की तिथि एवं समय	: **29/05/2024**
Samples Registration No. & Date नमूने की पंजीकरण सं. एवं तिथि	: **INSTR/HM/2425/SR00038, 28/05/2024**	Analysis Request Division/Organization विश्लेषण अनुरोध प्रभाग/संगठन	: **RD Chandigarh**
Sampling Plan Preference नमूनाकरण योजना प्राथमिकता	:	Sample Analysis Period नमूने के विश लेषण की अवधि	: **04/06/2024 to 04/06/2024**
Report Status रिपोर्ट स्थिति	: **Final**	Sample Details नमूना विवरण	: **Ground Water**

Sr.No	Date of Sample Collection नमूना संग्रहण की तिथि	Field Code नमूना स्थल	Sample Matrix नमूना मैट्रिक्स	Arsenic	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Nickel	Selenium	Zinc
1	28/05/2024	AW-02	Fresh Water	BDL	BDL	0.07	0.01	4.58	0.06	0.29	0.02	BDL	9.96
2	28/05/2024	BW-02	Fresh Water	BDL	BDL	BDL	BDL	0.31	BDL	0.16	BDL	BDL	0.07
3	28/05/2024	BW-03	Fresh Water	BDL	BDL	BDL	BDL	0.63	BDL	0.05	BDL	BDL	0.02
4	28/05/2024	BW-04	Fresh Water	BDL	BDL	BDL	BDL	0.13	BDL	0.05	BDL	BDL	0.04

*** END OF REPORT आख्या समाप्ति ***

BDL : Below Deduction Limit न्यूनतम विश्लेषण की सीमा

Remarks (if any) : Sir, Result is ready for your approval

Statement :

1. The results relate only to the samples tested
2. The report shall not be reproduced except in full. without the written approval of the laboratory.
3. The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).
4. The sample will be retained for 30 days from the date of issue of test report.

Analyst	Supervisor & Reviewer	Approved By (DH Inst-Lab)
Laxmi Narayan Gupta	B. K. Jena	Dr. K. Ranganathan

CENTRAL POLLUTION CONTROL BOARD केंद्रीय प्रदूषण नियंत्रण बोर्ड
HEAD OFFICE - DELHI
Parivesh Bhavan, East Arjun Nagar, Delhi - 110032

TC-7723

INSTRUMENTATION LABORATORY (Analysis Report) उपकरणीय प्रयोगशाला (विश लेषण आख्या)

Heavy Metals(Excluding Mercury)

ULR No: TC772324300000028F

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
Arsenic	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00049	
Cadmium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00042	
Chromium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00056	
Copper	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00035	
Iron	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00067	
Lead	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00031	
Manganese	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00043	
Nickel	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00054	
Selenium	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00113	
Zinc	APHA, ICP-MS, 3125-B, 24th Edition, 2023	mg/L	0.00059	

Analyst	Supervisor & Reviewer	Approved By (DH Inst-Lab)
Laxmi Narayan Gupta	B. K. Jena	Dr. K. Ranganathan