BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 75 / 2026

IN THE MATTER OF: -

DEEP CHANDRA PANDE .... PETITIONER

VERSUS

UTTARAKHAND POLLUTION

CENTRAL BOARD & ORS. .....RESPONDENT(S)

INDEX

6.	**ANNEXURE R – 5** COPY OF THE LATEST EFFLUENT TESTING REPORTS	41
7.	**ANNEXURE R – 6** COPY OF THE SHOWCAUSE NOTICE RECEIVED FROM UKPCB	42-44
8.	**ANNEXURE R – 7** COPY OF THE REPLY TO THE SHOWCAUSE NOTICE RECEIVED FROM UKPCB	45-93
9.	VAKALATNAMA	94
10.	PROOF OF SERVICE	95

RESPONDENT NO.4

THROUGH COUNSEL

MB ASSOCIATES,

Mansi Bajaj

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NEW DELHI – 110014

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DATE: 15/04/2026

PLACE: NEW DELHI

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Original Application No. 75/2026

IN THE MATTER OF:

Deep Chandra Pande ... Applicant

VERSUS

Uttarakhand Pollution Control Board and Ors. .... Respondents

AFFIDAVIT ON BEHALF OF RESPONDENT NO. 4 (M/S UJALA CYGNUS CENTRAL HOSPITAL, HALDWANI) IN TERMS OF THE ORDER DATED 30.01.2026.

IT IS MOST RESPECTFULLY SHOWETH:

1. That, I, Sh. Abhishek Dubey, S/o Akhelesh Chandra Dubey, aged about 40 Years, Unit Head of Ujala Cygnus Central Hospital, Haldwani, am well conversant with the facts of the case and am competent to sign this affidavit.

2. That this Hon'ble Tribunal took up the above referred matter on 30.01.2026 and was pleased to direct the following:

"……

2. Issue notice to the respondents for filing their response /reply by way of affidavit before the Tribunal at least one week before the next date of hearing through e filing. If any respondent directly

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files the reply without rooting it through his advocate, then the said respondent will remain virtually present to assist the Tribunal.

....."

3. That, in his Original application, the applicant has alleged Respondent No. 4 – M/s Ujala Cygnus Central Hospital, Haldwani of dumping untreated/ partially treated hospital waste water/ effluent through the tankers into the municipal sewer lines and not meeting the prescribed standards/ requisite norms with respect to the effluent discharged through ETP and STP installed in the premises of the Respondent No. 4.

4. That the answering Hospital is a multi-specialty 150 bedded hospital providing essential healthcare services to the public at large and has always been committed to complying with all applicable environmental laws and regulations.

5. That the answering hospital is duly authorized and operating strictly in accordance with statutory permissions granted by the Uttarakhand Pollution Control Board vide Consolidated Consent to Operate and Authorization, issued by the Board on 23.09.2023 and valid till 31.03.2028, under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974, Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and Authorization under Rule 10 of Bio-Medical Waste Management Rules, 2016.

Copy of the Consolidated Consent to Operate and Authorization has been attached at "**Annexure R-1**"

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6. That, therefore, the hospital is a fully authorized Health Care Facility, operating under valid permissions issued by the Uttarakhand Pollution Control Board.

7. That, in compliance to the conditions imposed by Uttarakhand Pollution Control Board, the hospital has already installed an Effluent Treatment Plant (ETP) of capacity 10 KLD and a Sewage Treatment Plant (STP) of capacity 100 KLD for treating the entire wastewater generated by the hospital.

8. That the ETP of capacity 10 KLD has been designed to treat wastewater generated from critical hospital sources including operation theatres, laboratories. After treatment in ETP, the effluent from the ETP is further treated in STP before disposing of the same. Independent detailed technical report prepared by S.M. Environmental Equipments, New Delhi concludes that the ETP system is technically adequate, efficient for continuous operation (approximately 20 hours per day), and capable of meeting the regulatory requirements prescribed by the Central Pollution Control Board and State Pollution Control Board.

   A copy of the report is placed as "**Annexure R-2**".

9. That, the 100 KLD Sewage Treatment Plant (STP) has been specifically engineered to treat approximately 100 KLD of wastewater generated from various hospital sources including kitchen and sanitation facilities through a scientifically structured combination of primary, biological and tertiary treatment processes. Independent detailed technical report prepared by S.M. Environmental Equipments, New Delhi concludes that the system is

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energy-efficient, compact in design and capable of handling high shock loads while ensuring substantial reduction of key pollutants including Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and suspended solids to within prescribed regulatory limits, thereby enabling safe reuse and discharge of treated water.

Copy of the report is placed as "**Annexure R-3**"

10. That the ETP and STP are being operated regularly. As mentioned in above paragraphs, the capacity of the installed ETP and STP is as per the prescribed conditions under consent to operate and authorization issued on 23.09.2023. However, the ETP and STP have been installed more than 10 years ago and, therefore, needs upgradation in terms of machinery and civil structure maintenance for continued efficient functioning. For that purpose, remapping and upgradation of STP and ETP is under progress which shall be completed by 30th June 2026.

Keeping the above in mind, even prior to the issuance of the present notice, the hospital had already initiated through active compliance measures and duly informed the board the Uttarakhand pollution Control Board ("**UKPCB**") as follows:

- Re-mapping and upgradation of ETP/ STP systems is under progress;
- Work would be completed within 4 to 5 months;
- Treated water would meet prescribed discharge standards and shall be reused.

Copy of the letter dated 14.01.2026 address to UKPCB is annexed as "**Annexure R-4**".

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That, the installed ETP and STP are being operated regularly. It is to submit that the bio-chemical system is very dynamic and sometimes vary in results. Now, necessary corrections have been introduced, till the revamp/ upgradation of ETP & STP, to ensure the proper functioning of the treatment process. The overall process has been optimised to achieve improved treatment results. **Latest effluent test report dated 16.02.2026 from an NABL Accredited and authorised laboratory of Government Of India shows the parameters in the treated effluent to be within the prescribed limits.**

Copy of the latest effluent testing reports are placed as **"Annexure R-5."**

iii. That, the condition with respect to effluent discharge in the Consolidated Consent to Operate and Authorization, issued by the Board on 23.09.2023 states as follows:

2. ***Conditions under the Water (Prevention & Control of Pollution) Act, 1974***

   (i) ***Liquid Waste Treatment and disposal: The liquid waste generated from the premises of the occupier shall be treated through waste water treatment plant as required with reference to quantity and quality of liquid waste. The liquid waste generated and treated from the premises shall confirm to the following limit as specified under BMW rules 2016, as amended to date, before discharge into sewer or land disposal.***

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Parameters	*Permissible Limit*
pH	*6.5 to 9.0*
Suspended solids	*100 mg/l (Max.)*
BOD	*30 mg/L (Max.)*
COD	*250 mg/L (Max.)*
Oil and Grease	*10 mg/L (Max.)*
Bio-assay test	*90% survival of fish after 96 hours in 100% effluent*

..."

Latest effluent testing reports dated 16.02.2026 (placed as **"Annexure R-5) shows the parameters to be within the limits.**

It is submitted that as the sewer line, outside the hospital, is choked, the treated effluent is, therefore, being discharged in the sewer line after a distance from the hospital.

12. That, the answering respondent No. 4 has received a Show Cause Notice from UKPCB dated 05.02.2026 (received by the respondent on 07.03.2026) based on the inspection conducted by the Board and sampling of the effluent done on 03.12.2025. The answering Respondent No. 4 has replied to the Show Cause Notice on 06.04.2026. The relevant excerpts of the reply are as follows:

"...

2. *That the hospital is duly authorized and operating strictly in accordance with statutory permissions granted by the Uttarakhand*

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Pollution Control Board. The Board has issued Authorization under Rule 10 of Bio-Medical Waste Management Rules, 2016 and Consent to Operate under section 25 of Water (Prevention and Control of Pollution) Act 1974 & section 21 of Air (Prevention and Control of Pollution) Act, 1981 dated 23.09.2023 which is valid till 31.03.2028.

Point 03:

The ETP and STP are being operated regularly, however remapping and upgradation of the plant is under progress and shall be completed on 30th June, 2026.

*Independent technical feasibility report prepared by S.M. Environmental Equipments, New Delhi, in respect of the 10 KLD Effluent Treatment Plant (ETP) installed at the Hospital, concludes that the ETP system is technically adequate and efficient. The discharge from the ETP is further treated in the STP of 100 KLD capacity installed in the Hospital. The copy of the report is annexed herewith as **ANNEXURE- B**.*

In addition, the technical feasibility report in respect of the 100 KLD Sewage Treatment Plant (STP) installed at the Hospital premises, prepared by S.M. Environmental Equipments, New Delhi, concludes that that the STP is technically adequate and efficient to trat 100 KLD sewage water (approximately 20 hours per day), and fully capable of meeting the regulatory requirements prescribed by the Central Pollution Control Board

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*and State Pollution Control Board, The copy of the report is annexed herewith as **ANNEXURE-C.***

Point 04:

*Necessary corrections in chemical dosing have been implemented to ensure the proper functioning of the treatment process. The overall process has been optimized to achieve improved treatment results. Copy of the latest effluent testing report dated 16.02.2026 from an authorized laboratory is Annexed as **Annexure -D** which shows the parameters in the treated effluent to be within the prescribed limits.*

Point 05:

The ETP and STP installed (with capacity 10 KLD and 100 KLD respectively) in the hospital are as per the prescribed conditions under Consent to Operate & Authorization issued on 23.09.2023. However, over the years it is observed that the actual discharge of effluent is higher than the estimated quantity assumed while installing ETP and STP. Therefore, upgradation of STP and ETP is currently in progress. The process shall be completed by 30 th June, 2026.

Keeping above in mind, even prior to the issuance of the present show cause notice, the Hospital had already initiated proactive compliance measures and duly informed the Board that:

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o Re-mapping and upgradation of ETP/STP systems was under process

o Work would be completed within 4–5 months

o Treated water would meet prescribed discharge standards and shall be reused

Copy of the letter dated 14.01.2026 addressed to UKPCB is Annexed as Annexure – E.

……"

4. In view of the above facts, it is respectfully requested that no action be taken against the hospital, as it has duly submitted its reply to the show cause notice within the stipulated timeline and hospital is in the process of upgrading its STP and ETP facilities as well. It is further submitted that the hospital is complying with all the conditions, which are mentioned in Biomedical Waste Management Rules, 2016 and the Environment Protection Act 1986 and rules made their under.

Copy of the Show Cause Notice Received from UKPCB and reply of the Hospital are placed as "**Annexure R-6**" and "**Annexure R-7**" respectively.

It is prayed that the above response of Respondent No. 4 may be taken on records and pass an appropriate Order in the present OA.

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UJALA CYGNUS CENTRAL HOSPITAL HALDWANI 263139

Abhishek.
DEPONENT

VERIFICATION

Verified at Haldwani on this 13th day of April, 2026 that the contents of this Affidavit are true and correct to the best of my knowledge and based on records, no part of it is false and nothing material has been concealed.

UJALA CYGNUS CENTRAL HOSPITAL HALDWANI 263139

Abhishek.
DEPONENT

NOTARY U.C. TEWARI Notary, HALDWANI Distt. Nainital (U.K.) India

Certified that Sri/Smt. Abhishek
the deponent identified by ....
sworn and verified the contents of
the affidavit at ....
on date 13/4/26 at ....

(U.C. TEWARI)
Notary, HALDWANI
Distt. Nainital (U.K.) India

Identified By

ANNEXURE - R-1

11

HEAD OFFICE
Uttarakhand Pollution Control Board
"Gaura Devi Paryavaran Bhawan"
46B, IT Park, Sahastradhara Road, Dehra Dun
E-mail : mankpcb@yahoo.com, Phone No.-0135-2607892

UKPCB/HO/BMW-76/2023- 840 Date: 23-9-2023

SPEED POST

To,

M/s Ujala Cygnus Central Hospital,
Gas Godam Tiraha, Kaladhungi Road,
Haldwani, Distt. Nainital.

Sub: Consolidated Consent to Operate and Authorization here in after referred to as the CCA (Consolidated Consent & authorization), under Section-25 of the "Water (Prevention & Control of Pollution) Act, 1974"; Section-21 of the "Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule-10 of Bio-Medical Waste Management Rules, 2016 (as amended time to time), notified under "Environment (Protection) Act, 1986" as applicable (to be referred hereinafter as Water Act, Air Actand BMW Rules respectively).

CCA is hereby granted **M/s Ujala Cygnus Central Hospital** located at Gas Godam Tiraha, **Kaladhungi Road, Haldwani, Distt. Nainital** subject to the provisions of Water Act, Air Act & BMW Rules and the orders that may be made further and subject to following terms and conditions :-

1. Conditions under Bio-Medical Waste Management Rules, 2016 (as amended time to time)

(i) **Authorization No**..... and **Date of issue**.

(ii) **Mr. Govind Singh**, an occupier of **M/s Ujala Cygnus Central Hospital** located at Gas Godam **Tiraha, Kaladhungi Road, Haldwani, Distt. Nainital** is hereby granted an authorization for Generation, Segregation, Collection, Storage, Treatment and Disposal of Bio-medical wastes as per table given below.

(iii) **Mr. Govind Singh**, an occupier of **M/s Ujala Cygnus Central Hospital** located at Gas **Godam Tiraha, Kaladhungi Road, Haldwani, Distt. Nainital** is hereby authorized for handling of Bio-medical wastes generated from Hospital as per capacity given below:

I.	Nos of Beds	150 No. of Beds
II.	Quantity of Bio-Medical Waste generation (Yellow, Red, Blue, White category in Kg/Day)	50.0 Kg/Day
III.	Disposal of Bio-medical Waste	
	Waste Disposal Category	**Mode of Disposal**
	A. Yellow category	Through CBWTF (i.e. M/s Global Environmental Solution Gadarpur, U.S. Nagar)
	B. Red category	
	C. Blue category	
	D. White category	
IV.	Waste Water disposal	10 KLD ETP & 100 KLD STP

(iv) This Authorization shall be in force for a period of **31.03.2028.**

(v) This Authorization is subject to the conditions stated below and to such other conditions as may be specified in the **BMW Rules 2016**, for the time being in force under the Environment **(Protection) Act, 1986**.

(vi) Hospital shall obtain Authorization for Hazardous waste under Hazardous& other Wastes **(Management & Transboundary movement) Rules, 2016** framed under the Environment **(Protection) Act 1986** and should dispose it as per rules/guidelines.

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(vii) In case of any transportation of hazardous waste, the details in Form-10 of the Hazardous & other Wastes (Management & Transboundary movement) Rules, 2016 shall be submitted to the Board.

Terms and Conditions of Authorization:

1. The authorization shall comply with the provisions of the Environment (Protection) Act, 1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the prescribed authority, under BMW Rules, 2016 (as amended time to time).
3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the biomedical wastes without obtaining prior permission of the prescribed authority.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. It is the duty of the authorised person to take prior permission of the prescribed authority to close down the facility and such other terms and conditions may be stipulated by the prescribed authority.
6. The occupier shall strictly adhere to the duties of occupier as defined under the Bio-Medical Waste Management Rules, 2016 (as amended time to time).
7. The applicant shall submit audited balance sheet of the unit at the end of each financial year so that fee submitted by the applicant could be assessed.
8. All bedded health care units, maintain and update on day-to-day basis the bio-medical waste management register and display the monthly record on its website according to the biomedical waste generated in terms of category and colour coding as specified in Schedule I.
9. All bedded health care facilities (any number of beds), make available the annual report on its web-site within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018.
10. The occupier shall submit a registration copy along with copy of agreement undertaken with CBWTF i.e. M/s Global Environmental Solution Gadarpur, U.S. Nagar.
11. The Occupier Shall maintain Bar Code System for bags or Containers Containing Bio- medical waste to be sent out of the premises for further treatment and disposal in accordance of Guidelines issued by the CPCB from time to time.
12. Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site in the manner as prescribed by the WHO or NACO guidelines and then sent to the CBMWTDF for final disposal.
13. Non-bedded occupiers shall dispose infectious liquid waste only after treatment by disinfection as per schedule-II (6) of the Bio- Medical Waste Management Rules 2016, as (Amendment) Rules 2019.
14. Health Care Facility should operate ETP/STP continuously to comply with the effluent discharge standard for liquid waste from the date of publication of the Bio Medical Waste Management Rules 2016, as (Amendment) Rules 2019.
15. The occupier of health care facility shall strictly adhere to the provisions of the Bio-medical Waste Management Rules, 2016 (as amended time to time) & guidelines issued by the Central Pollution Control Board, time to time.

2. **Conditions under the Water (Prevention & Control of Pollution) Act, 1974**

(i) **Liquid Waste Treatment and disposal:** The liquid waste generated from the premises of occupier shall be treated through waste water treatment plant as required with reference to quantity and quality of liquid waste. The Liquid waste generated and treated from the premises shall confirm to the following limit as specified under the BMW Rules, 2016 as amended before discharge into sewer or land disposal.

Parameters	Permissible Limit
pH	6.5 to 9.0
Suspended Solids	100 mg/L (Max.)
BOD	30 mg/L (Max.)

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COD	250mg/L (Max.)
Oil & Grease	10 mg/L (Max.)
Bio-assay test	90% survival of fish after 96 hours in 100% effluent

(ii) The occupier shall ensure appropriate operation & maintenance of Sewage Treatment Plant continuously so as to meet the described discharge parameters within limit all the time. Analysis reports are submitted to the Board's offices on a half yearly basis.

3. **Conditions under the Air (Prevention & Control of Pollution) Act, 1981: -**

(i) The applicant shall use following fuel and install an appropriate noise & air pollution control system is required with reference to generation of emissions and maintain the same continuously to achieve the level of noise /air pollutants to the following standards: -

S. No	Stack attached with	Stack height (Meter)	Type of Fuel	Fuel Quantity	Emission Control Equipment	Emission standards not to exceed
1.	D.G. Set (320 KVA) x 1	3.5	Diesel	-	Acoustic enclosure	-
2.	D.G. Set (180 KVA) x 1	3	Diesel	-	Acoustic enclosure	-

In case of stoppage of functioning of air pollution control equipment production has to be stopped immediately and this Board has to be intimated by fax/phone email with a report in this regard to be dispatched immediately.

(ii) Noise from the D.G. Set and other source(s) should be controlled by providing an acoustic enclosure as is required for meeting the ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial, Commercial, Residential, Silence) which are as follows: -

Standards for Noise level in db(A) Leq	Industrial Area		Commercial Area		Residential Area		Silence Zone	
	Day time	Night time	Day time	Night time	Day time	Night time	Day time	Night time
	75	70	65	55	55	45	50	40

Day time: from 6.00 a.m. to 10.00 p.m., Night time: from 10.00 p.m. to 6.00 a.m.

4. **Other Specific and General Conditions:**

1. The Occupier(s) shall comply with the provisions of the Biomedical Waste Management Rules 2016 as amended, Water (Prevention and Control of Pollution) Act, 1974 as amended, Air (Prevention and Control of Pollution) Act, 1981 as amended and Environment (Protection) Act, 1986 and Rules/Notification made there under.
2. The Occupier shall strictly follow duties of Occupier as specified under the Bio-medical Waste Management Rules, 2016 as amended time to time.
3. The Solid wastes generated from the hospital shall be disposed as per the provisions of Solid Waste Management Rules, 2016.
4. The hospital shall take adequate measures to control of noise from its own source so as to comply with the standards as may be applicable.
5. The hospital shall strictly adhere to the safety norms and shall obtained necessary permission from concerned authority.
6. The bins/bags should be labeled with bio-hazardous symbol. The bags used for BMW should be non-chlorinated.
7. Polythene bags carrying waste have to be sealed/ tied at the top whenever waste is being transported within/outside hospitals.
8. Polythene bags placed in bins should be changed with each shift when they are 3/4th full.

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9. Color coding of waste bines according to schedule III & IV of the rules the color coding & details of waste should be marked on collection bins.
10. No untreated bio-medical waste shall be kept stored beyond a period of 48 hours. If it becomes necessary to store beyond 48 hours the authorized person must take permission of the prescribed authority & to ensure that it does not adversely affect human health & environment.
11. Hospital shall submit annual report to the prescribed authority in Form-IV, inclusive information's about the categories and quantities of BMW handled
12. Bio-medical waste shall not be mixed with other waste.
13. The occupier shall ensure that the deep burial pits be constructed as per prescribed specification given in the Rules.
14. Validation test (spore testing and routine test for autoclave shall be performed regularly. Details regarding this as adopted shall be sent within a month.
15. The mercury spillage/losses should be given proper attention, so that it should not be part of the bio-medical waste or other solid wastes generated from your hospital
16. The Occupier shall ensure strict compliance of above conditions on day-to-day basis
17. The Occupier shall comply with other general conditions specified in the guidelines issued by the MOEF or CPCB/SPCB from time to time. Noncompliance of any provisions of related Water Act; Air Act; BMW Rules and E (P) Act and Rules made there under as amended time to time will attract legal action under provisions of the aforesaid Acts and Rules.
18. The Board reserves the right to revoke/modify any condition(s) of this CCA at any time in case the hospital is found violating any of the provisions of the Biomedical Waste Management Rules, 2016 as amended; Water (Prevention and Control of Pollution) Act, 1974 as amended; Air (Prevention and Control of Pollution) Act, 1981 as amended and Environment (Protection) Act, 1986 and Rules/Notification made there under.

S.K.Pattnaik
Member Secretary

Letter No. :UKPCB/HO/BMW-76/2023 Dated as Above.

Copy to:-

1. Chief Medical Officer, Nainital for information and compliance, please.
2. Regional Officer, Uttarakhand Pollution Control Board, Haldwani for information & compliance.
3. Guard File.

Member Secretary

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HEAD OFFICE
Uttarakhand Pollution Control Board
"Gaura Devi Paryavaran Bhawan"
46B, IT Park, Sahastradhara Road, Dehra Dun
E-mail: msukpcb@yahoo.com, Phone No.- 0135-2607092

UKPCB/HO/BMW-76/2023/840 **Date: 23-9-2023**

SPEED POST

To,
M/s Ujala Cygnus Central Hospital,
Gas Godam Tiraha, Kaladhungi Road,
Haldwani, Distt. Nainital.

Sub: Consolidated Consent to Operate and Authorization here in after referred to as the CCA (Consolidated Consent & authorization), under Section-25 of the "Water (Prevention & Control of Pollution) Act, 1974"; Section-21 of the "Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule-10 of Bio-Medical Waste Management Rules, 2016 (as amended time to time), notified under "Environment (Protection) Act, 1986" as applicable (to be referred hereinafter as Water Act, Air Act and BMW Rules respectively)

CCA is hereby granted **M/s Ujala Cygnus Central Hospital** located at **Gas Godam Tiraha, Kaladhungi Road, Haldwani, Distt. Nainital** subject to the provisions of Water Act, Air Act & BMW Rules and the orders that may be made further and subject to following terms and conditions: -

1. Conditions under Bio-Medical Waste Management Rules, 2016 (as amended time to time):

(i) Authorization No. ..... and Date of issue .....
(ii) **Mr. Govind Singh,** an occupier of **M/s Ujala Cygnus Central Hospital** located at Gas Godam Tiraha, Kaladhungi Road, Haldwani, Distt. Nainital is hereby granted an authorization for Generation, Segregation, Collection, Storage, Treatment and Disposal of Bio-medical waste as per table given below:
(iii) **Mr. Govind Singh,** an occupier of **M/s Ujala Cygnus Central Hospital** located at Gas Godam Tiraha, Kaladhungi Road, Haldwani, Distt. Nainital is hereby authorized for handling of Bio-medical wastes generated from Hospital as per capacity given below:

I.	**No. of Beds**	150 No. of Beds
II.	**Quantity of Bio-Medical Waste generation (Yellow, Red, Blue, White category in Kg/Day)**	50.0 Kg/Day
III.	**Disposal of Bio-medical Waste**	

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	Waste Disposal Category	Mode of Disposal
	A. Yellow category	Through CBWTF (i.e. M/s Global Environmental Solution Gadarpur, U.S. Nagar)
	B. Red category	
	C. Blue category	
	D. White category	
IV.	**Waste Water disposal**	10 KLD ETP & 100 KLD STP

(iv) This Authorization shall be in force for a period of **31.03.2028.**
(v) This Authorization is subject to the conditions stated below and to such other conditions as may be specified in the BMW Rules 2016, for the time being in force under the Environment (Protection) Act, 1986.
(vi) Hospital shall obtain Authorization for Hazardous waste under Hazardous & other Wastes (Management & Transboundary movement) Rules, 2016 framed under the Environment (Protection) Act 1986 and should dispose it as per rules/guidelines.

(vii) In case of any transportation of hazardous waste, the details in Form-10 of the Hazardous and other Wastes (Management & Transboundary movement) Rules, 2016 shall be submitted to the Board.

Terms and Conditions of Authorization:

1. The authorization shall comply with the provisions of the Environment (Protection) Act, 1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the prescribed authority, under BMW Rules, 2016 (as amended time to time).
3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the biomedical wastes without obtaining prior permission of the prescribed authority.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
5. It is the duty of the authorized person to take prior permission of the prescribed authority to close down the facility and such other terms and conditions may be stipulated by the prescribed authority.
6. The occupier shall strictly adhere to the duties of occupier as defined under the Bio-Medical Waste Management Rules, 2016 (as amended time to time).
7. The applicant shall submit audited balance sheet of the unit at the end of each financial year so that fee submitted by the applicant could be assessed.
8. All bedded health care units, maintain and update on day-to-day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in Schedule-I.
9. All bedded health care facilities (any number of beds), make available the annual report on its web-site within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018.

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10. The occupier shall submit a registration copy along with copy of agreement undertaken with CBWTF i.e. M/s Global Environmental Solution Gadarpur, U.S. Nagar.
11. The Occupier shall maintain Bar Code System for bags or Containers Containing Bio-medical waste to be sent out of the premises for further treatment and disposal in accordance of Guidelines issued by the CPCB from time to time.
12. Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site in the manner as prescribed by the WHO or NACO guidelines and then sent to the CBMWTDF for final disposal.
13. Non-bedded occupiers shall dispose infectious liquid waste only after treatment by disinfection as per schedule-II (6) of the Bio-Medical Waste Management Rules 2016, as (Amendment) Rules 2019.
14. Health Care Facility should operate ETP/STP continuously to comply with the output discharge standard for liquid waste from the date of publication of the Bio-Medical Waste Management Rules 2016, as (Amendment) Rules 2019.
15. The occupier of health care facility shall strictly adhere to the provisions of the Bio-medical Waste Management Rules, 2016 (as amended time to time) & guidelines issued by the Central Pollution Control Board, time to time.

2. Conditions under the Water (Prevention & Control of Pollution) Act, 1974:
(i) **Liquid Waste Treatment and disposal:** The liquid waste generated from the premises of occupier shall be treated through waste water treatment plant as required with reference to quantity and quality of liquid waste. The Liquid waste generated and treated from the premises shall confirm to the following limit as specified under the BMW Rules, 2016 as amended before discharge into sewer or land disposal:

Parameters	**Permissible Limit**
pH	6.5 to 9.0
Suspended Solids	100 mg/L (Max.)
BOD	30 mg/L (Max.)
COD	250mg/L (Max.)
Oil & Grease	10 mg/L (Max.)
Bio-assay test	90% survival of fish after 96 hours in 100% effluent

(ii) The occupier shall ensure appropriate operation & maintenance of Sewage Treatment Plant, continuously so as to meet the described discharge parameters within limit all the time. Analysis reports are submitted to the Board's offices on a half yearly basis.

3. Conditions under the Air (Prevention & Control of Pollution) Act, 1981:-

(i) The applicant shall use following fuel and install an appropriate noise & air control system as is required with reference to generation of emissions and maintain the same continuously so as to achieve the level of noise/air pollutants to the following standards:-

S. No	**Stack attached**	**Stack height**	**Type of Fuel**	**Fuel Quantity**	**Emission Control**	**Emission standards not**

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	with	(Meter)			Equipment	to exceed
1.	D.G. Set (320 KVA) x 1	3.5	Diesel	-	Acoustic enclosure	-
2.	D.G. Set (180 KVA) x 1	3	Diesel	-	Acoustic enclosure	-

In case of stoppage of functioning of air pollution control equipment, production has to be stopped immediately and this Board has to be intimated by fax/phone/email with a report in this regard to be dispatched immediately.

(ii) Noise from the D.G. Set and other source(s) must be controlled using acoustic enclosures to comply with prescribed ambient noise standards for industrial, commercial, residential, or silence zones during day and night, as outlined below:

The text from the section shown in your image is as follows:

(ii) Noise from the D.G. Set and other source(s) should be controlled by providing an acoustic enclosure as is required for meeting the ambient noise standards for night and day time as prescribed for respective areas/zones (Industrial, Commercial, Residential, Silence) which are as follows: -

Standards for Noise level in db(A) Leq	Industrial Area (Day / Night)	Commercial Area (Day / Night)	Residential Area (Day / Night)	Silence Zone (Day / Night)
	75 / 70	65 / 55	55 / 45	50 / 40

Day time: from 6.00 a.m. to 10.00 p.m., Night time: from 10.00 p.m. to 6.00 a.m.

4. Other Specific and General Conditions:

1. The Occupier(s) shall comply with the provisions of the Biomedical Waste Management Rules, 2016 as amended; Water (Prevention and Control of Pollution) Act, 1974 as amended; Air (Prevention and Control of Pollution) Act, 1981 as amended and Environment (Protection) Act, 1986 and Rules/Notification made there under.
2. The Occupier shall strictly follow duties of Occupier as specified under the Bio-medical Waste Management Rules, 2016 as amended time to time.
3. The Solid wastes generated from the hospital shall be disposed as per the provisions of Solid Waste Management Rules, 2016.
4. The hospital shall take adequate measures to control of noise from its own source so as to comply with the standards as may be applicable.
5. The hospital shall strictly adhere to the safety norms and shall obtained necessary permission from concerned authority.
6. The bins/bags should be labeled with bio-hazardous symbol. The bags used for BMW should be non-chlorinated.

8

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7. Polythene bags carrying waste have to be sealed/tied at the top whenever waste is being transported within/outside hospitals.
8. Polythene bags placed in bins should be changed with each shift when they are 3/4th full.
9. Color coding of waste bins according to schedule III & IV of the rules the color codings & details of waste should be marked on collection bins.
10. No untreated bio-medical waste shall be kept stored beyond a period of 48 hours. If it becomes necessary to store beyond 48 hours the authorized person must take permission of the prescribed authority & to ensure that it does not adversely affect human health & environment.
11. Hospital shall submit annual report to the prescribed authority in Form-II, including information's about the categories and quantities of BMW handled.
12. Bio-medical waste shall not be mixed with other waste.
13. The occupier shall ensure that the deep burial pits be constructed as per prescribed specification given in the Rules.
14. Validation test (spore testing and routine test for autoclave) shall be performed regularly. Details regarding this as adopted shall be sent within a month.
15. The mercury spillage/losses should be given proper attention, so that it should not be part of the bio-medical waste or other solid wastes generated from your hospital.
16. The Occupier shall ensure strict compliance of above conditions on day-to-day basis.
17. The Occupier shall comply with other general conditions specified in the guidelines issued by the MOEF or CPCB/SPCB from time to time. Noncompliance of any provisions of related Water Act; Air Act; BMW Rules and E (P) Act and Rules made there under as amended time to time will attract legal action under provisions of the aforesaid Acts and Rules.
18. The Board reserves the right to revoke/modify any condition(s) of this CCA at any time, in case the hospital is found violating any of the provisions of the Biomedical Waste Management Rules, 2016 as amended; Water (Prevention and Control of Pollution) Act, 1974 as amended; Air (Prevention and Control of Pollution) Act, 1981 as amended and Environment (Protection) Act, 1986 and Rules/Notification made there under.

(Signature)
S.K. Pattnaik
Member Secretary

Letter No.: UKPCB/HO/BMW-76/2023 Dated as Above

Copy to:-

1. Chief Medical Officer, Nainital for information and compliance, please.
2. Regional Officer, Uttarakhand Pollution Control Board, Haldwani for information & compliance.
3. Guard File.

(Signature)
Member Secretary

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ANNEXURE-R-2

15

Technical Report of 10 KLD
Effluent Treatment Plant

Submitted To:

M/s, Ujala Cygnus Central Hospital
Kaladhungi Road, near Gas Godam,
Tiraha, Kusumkhera,
Haldwani, Uttarakhand 263139

Prepared By

S M ENVIRONMENTAL EQUIPMENTS
C-430, Sector-19, Rohini,
New Delhi – 110 085.
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Email: smenvo@gmail.com

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16

1. INTRODUCTION

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 is going to installed a Effluent Treatment Plant of capacity 10 KLD at their hospital for the treatment of effluent generates from various section of the hospital. Based on the observation and assessment a technical assessment report is prepared.

This report describes various aspects related to technical adequacy of the Effluent cum Effluent Treatment Plant of capacity 10 KLD. The technical assessment includes the quantification of wastewater, preparation of ETP layout and dimensioning of different components of S.T.P.

2. SOURCES OF WASTEWATER

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 has installed a Effluent Treatment Plant of capacity 10 KLD at to treat the sewage/wastewater generated from different sections of the Hospital before finally discharging it into the sewage or reuse.

The various sources from where wastewater is being generated is identified as: Operation Theater, Path. Lab, Kitchen, Toilets and bathrooms.

Total sewage generation from the premises is around 10 KLD. Therefore, the present S.T.P has been designed for the treatment of total 10 KLD capacity. The treated water is used in horticulture, flushing, cooling towers etc. and partially discharged into sewer line

The main parameters identified in the wastewater as pollutant load are BOD and suspended solids.

3. DESIGN BASIS OF EFFULENT TREATMENT PLANT

The characteristics of sewage considered for designing is given below in table:

S.NO.	Parameter	Unit	Raw effluent	Treated Water
1	Design Flow	M3/day	10	9
2	Average Flow	M3/hr	0.5	0.45

Characteristics of Sewage

S.NO.	Parameter	Unit	Raw effluent	Treated Effluent after Filtration	UF Water Treatment
1	P^H		6-8	5.5-9	7-8
2	COD	mg/l	400-800	Less than 100	Less than 20
3	TSS	mg/l	150-350	Less than 50	Less than 10
4	OIL&GEASE	mg/l	20-30	Less than 10	Less than 1
5	BOD5	mg/l	250-350	Less than 30	Less than 5

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17

4. SELECTION OF TREATMENT TECHNOLOGY:

The Hospital has a Effluent Treatment Plant for the total effluent streams mentioned above. A detailed analysis of the control system has been made in order to determine the effectiveness of the control system. The treatment unit virtually works on a 24-hour basis although the Effluent discharges follow cycles with high peaks and low troughs depending on the time of the day due to the fact of being mostly originating from domestic activities.

The Effluent cum Effluent Treatment Plant has been designed and installed based on combined treatment Physio Chemical process involving primary settling, Reaction Coagulation Flocculation Settling, polishing & filtration. Chemically Treated effluent goes to STP for further Biological Treatment

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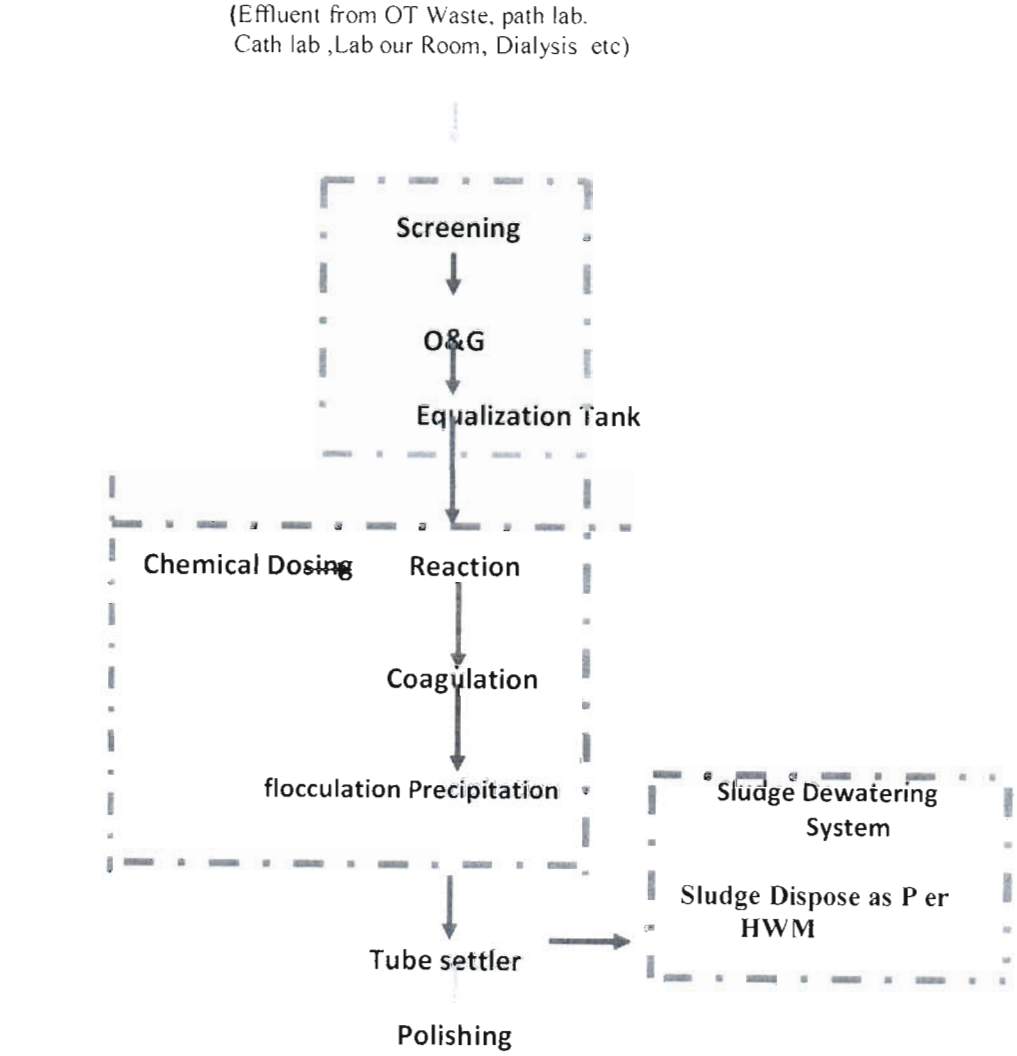
18

Schematic diagram for Physico Chemical Treatment Plant & Filtration unit



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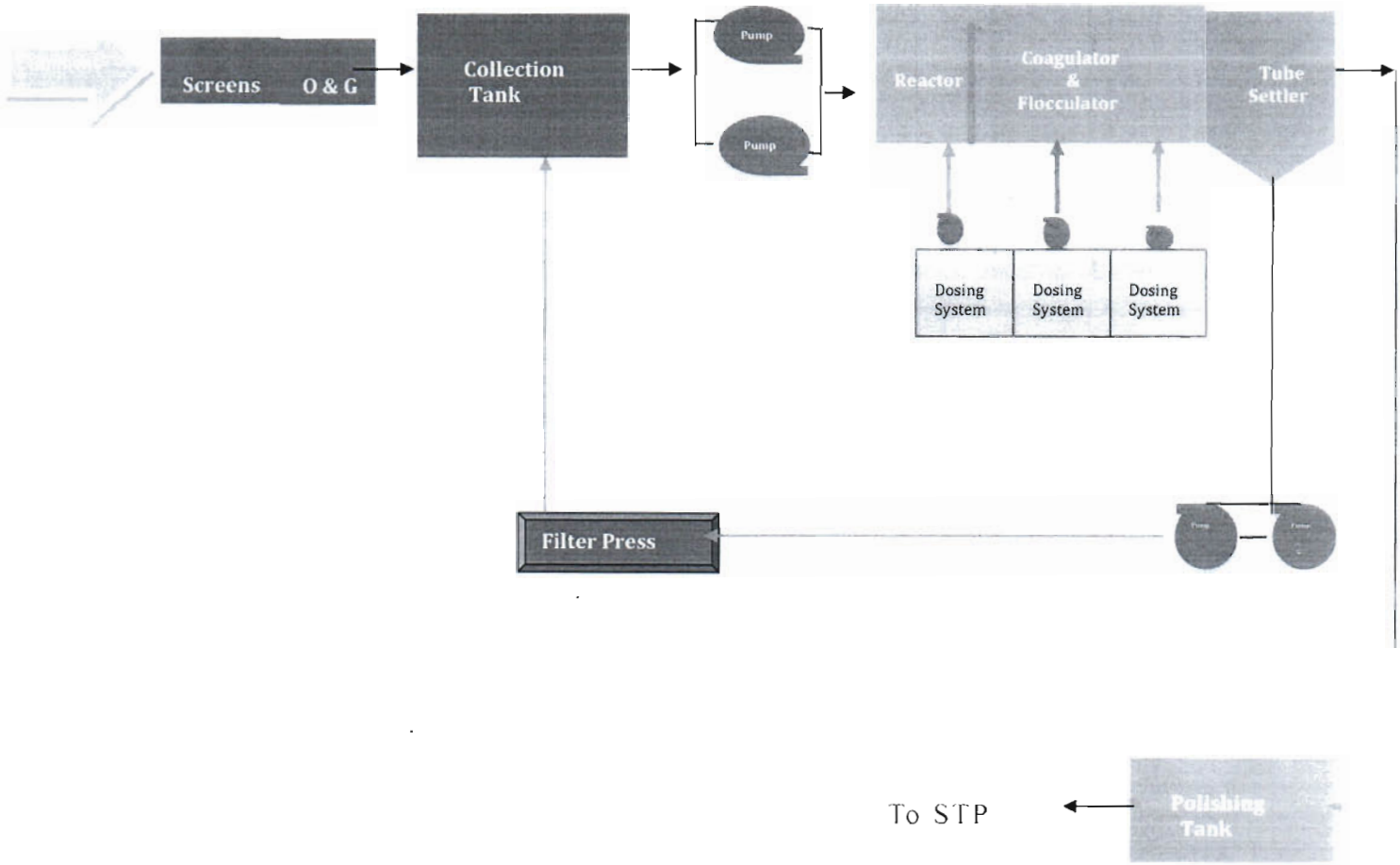
19

Influent Treatment Plant P & I Diagram (Capacity:10KLD)



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5. TREATMENT PLANT PROCESS UNITS

The Effluent treatment plant has been designed based on continuous flow operation for the treatment of the Yellow Effluent from (OT Waste, path lab,Cath lab ,Lab our Room, Dialysis etc) generated during different process of Hospital. The Effluent Treatment Plant consists of the following units:

I. Process Units
Screen Chamber
Oil & Grease Trap
Collection cum Equalization Tank
Reactor
Coagulation/Precipitation
Flocculation
Hopper Bottom Clarifier
Polishing

II. Mechanical Ancillary Units:
Raw Sewage Transfer Pump
Plant Room Drainage Pump
Air Blower
Sludge Recirculation Pumps
Filter Feed Pumps
Pressure Sand Filter
Activated Carbon Filter
Sludge Filter Unit

III. Electrical & Electronics Ancillary Units:

Electrical Control Panel

PH Meter,

Flow Meter

4. Effluent Treatment Plant Working Principle

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21

- **Bar Screen:** Raw Effluent from the source is received into the bar screen chamber by gravity. Screen provided will remove all floating and big size matter such as plastics, polythene bags, glasses, stones etc; which may otherwise choke the pipeline and pumps.

- **O& G Trap :** An Oil and Grease Trap also known as Grease Trap, **Grease Interceptor** is a device used to trap oil, grease, food solids etc from the wastewater before they enter into a sewer system. The Oil and Grease Trap prevents the clogging of sewer by preventing the Oil, grease fats and solids from entering the sewer.

- **Collection-cum-Equalization Tank**: Usually, generation is more during morning hours and evening hours. Visually no sewage is generated during night hours. Any biological system needs constant feed for bacteria to work efficiently. Hence, it is important to put an equalization tank to collect the excess flow during peak hours and feed sewage in lean hours. Provision of air grid is made for thoroughly mixing of sewage to make it of homogenous quality and to keep the suspended matter in suspension and to avoid septic condition.

- **Transfer of Effluent :** The sewage transfer pump of suitable discharge rate 1 is provided. The operation of the pump is controlled through level controller. The influent is transferred to neutralization tank.

- **Neutralization:- neutralization** or **neutralization** is a chemical reaction in which acid and a base react with an equivalent quantity of each other. In a reaction in water, neutralization results in there being no excess of hydrogen or hydroxide ions present in the solution. The pH of the neutralized solution depends on the acid strength of the reactants.

- **Coagulation: -**

Coagulation water treatment is the first step in chemical wastewater treatment. Instead of passing over particles that would otherwise slip through the filter and fall too slowly to be trapped as sediment, coagulation clumps them together so they are more easily removed.
In coagulation treatment, a harmless chemical such as alum causes all of the particles to give off a positive charge and thus clump together, making them easier to filter. Coagulation is especially useful in removing the chemical phosphorus from water. Yet coagulation water treatment is far from

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22

- Flocculation

  Flocculation goes hand in hand in wastewater treatment. Once the waste particles have clumped together using coagulation, flocculating agents in wastewater treatment are used to remove the clumps. Flocculants are lightweight, medium weight and heavy polymers that cause The destabilized clumps of particles to agglomerate and drop out of the solution, removing them from the filtered water. The weight used depends on the type of particle.

  Flocculants are like a high-tech rope that ties all of the coagulated clumps together. Flocculants come in various charges, charge densities, molecular weights and forms, and they have also been around for centuries. Natural polymers, such as crushed nuts, have been used as flocculants since prehistoric times by some central African tribes.

- **Tube settlers: -**
  which are also known as plate settlers or lamella clarifiers are used in drinking- and wastewater treatment plants to settle out suspended solids. Depending on the application the TSS (total suspended solids) loading can vary between 50 to 500mg/l or more. When the solid settling force is higher as all drag forces, solids will settle down on the channel surface of the tube settler, accumulate with other solids and slide down as sludge.

- **Sludge Removal :** The sludge from the bottom of the clarifier is transferred to techno bag in which fabric cloth filters are attached. The filtrate from here is again sent back to the collection tank for its further treatment. The semi dried sludge is then kept for solar drying. After solar drying sludge is collected and stored separately for its further disposal/use as per applicable guidelines.

- **Polishing Tank:** In polishing tank, Required Chemical will be use to adjust the PH value

- **MGF &ACF**: The treated water of Polishing Tank. Passes through Sand filter and ACF is used as per requirement

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23

6. SPECIFICATIONS OF EQUIPMENTS

A-Electro-Mechanical Equipment

S.no	Equipment	MOC	Specification	Make	Quantity
1	Bar Screen	SS-304	Perforated	SMEE	1 No
2	Raw Sewage Transfer Pump	CI	1 M^3/hr@2 . Kg operate on 2900 RPM Self Priming Non-Clog	Willo / Kirlosker /Equivalent	2(1w+1s)
3	Coagulation				
4	Flocculation				
5	Tube deck Media	PVC	Hexagonal shape height 750 mm	SDM/SMEE/Equiv	lot
6	Air Piping	GI /UPVC	B Class epoxy coated / schedule 25	Zindal / Astral	lot
7	Sludge Recirculation Pump	CI	1 M^3/hr@1.5kg operated on 2900 rpm Self Priming Non-Clog	Willo / Kirlosker	1(1w)
8	Plant Piping & Valve	UPVC/GI Zindal	Dia-25 mm, Schedule 40/ B Class with epoxy coating	Astral	lot
9	Chemical Dosing System	PVC tank	One No 1 to 6 & Two no 1 to 10 LPH	SMEE Pump Asia LMI/Pentair /E Dose / Minimex	3
10	Electrical Panel (MCC)		Details attached	Ess Tee Power	1
11	Cable	Copper PVC	3 core 1.5 to 2mm thick Armored copper wire	Poly cab	lot
12	UV System		1M^3/hr	Alfa	1

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24

B. MS FRP/ Civil Structure.

S. No.	Tank	Quantity	Capacity	Size in Meter	MOC	Scope
1	Bar Screen, Oil and Grease Chamber	1				Existing
2	Collection Equalization tank. Existing Septic tank	1				Existing
3	Coagulation		1 M^3			SMEE
4	Flocculation		1 M^3			SMEE
5	Tube Setling		2 M^3			SMEE
6	Polishing Tanks	1	2 M^3			SMEE
7	Sludge Drying Bed	1			Bricks masonry	Existing
8	Piping from ETP Tank to STP	1			PVC	Existing
9	Platforms Foundation,	1	6X5 M^2		CC	Existing

7. OTHER ELECTRICAL COMPONENTS

These are used of standard company make of adequate capacity as per the requirement. As the E.T.P is designed for its 20 hrs. continuous operation, each electrical component is used with additional stand by unit to operate on alternate basis.

8. SLUDGE HANDLING

Sludge collected from the Filter Press should be sun dried and collected in the bags sealed and disposed of as per applicable Bio medical waste rule guidelines.

9. SUMMARY OF TREATMENT PROCESS UNITS AND THEIR TECHNICAL ADEQUACY

The treatment process units are described above are summarized and presented in table above. The table shows the status of the equipment and process units in terms of their adequacy for the treatment of the sewage.

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25

The table also indicates that the process units are technically adequate for the operation of the Effluent- Treatment Plant giving a consistent operational result.

10. CONCLUSION

It is obvious from the detail described above, the ETP seems adequate as well as efficient to treat 10 KLD sewage water (for 20 hours operation/ day) To meet the regulatory requirements of Central & State Pollution Control Board. The different sub-units of the E.T.P. are of adequate capacity to treat the 10 KL sewage effluent generated per day. The unit is advised to manage the sludge as per applicable rules. In addition, the unit is advised to maintain daily logbook for quantifying the actual daily discharge.

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ANNEXURE-R-3

26

Technical Report of 100 KLD
(MBBR Based) Sewage Treatment Plant

Submitted To:

M/s, Ujala Cygnus Central Hospital
Kaladhungi Road, near Gas Godam,
Tiraha, Kusumkhera,
Haldwani, Uttarakhand 263139

Prepared By

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27

1. INTRODUCTION

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 is going to installed a Sewage treatment Plant of capacity 100 KLD at their hospital for the treatment of effluent generates from various section of the hospital. Based on the observation and assessment a technical assessment report is prepared.

This report describes various aspects related to technical adequacy of the Effluent cum Sewage treatment Plant of capacity 100 KLD. The technical assessment includes the quantification of wastewater, preparation of STP layout and dimensioning of different components of S.T.P.

2. SOURCES OF WASTEWATER

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 has installed a Sewage treatment Plant of capacity 100 KLD at to treat the sewage/wastewater generated from different sections of the Hospital before finally discharging it into the sewage or reuse.

The various sources from where wastewater is being generated is identified as: Operation Theater, Path. Lab, Kitchen, Toilets and bathrooms.

Total sewage generation from the premises is around 100 KLD. Therefore, the present S.T.P has been designed for the treatment of total 100 KLD capacity. The treated water is used in horticulture, flushing, cooling towers etc. and partially discharged into sewer line

The main parameters identified in the wastewater as pollutant load are BOD and suspended solids.

3. DESIGN BASIS OF SEWAGE TREATMENT PLANT

The characteristics of sewage considered for designing is given below in table:

S.NO.	Parameter	Unit	Raw effluent	Treated Water
1	Design Flow	M3/day	100	90
2	Average Flow	M3/hr	5	4.5

Characteristics of Sewage

S.NO.	Parameter	Unit	Raw effluent	Treated Effluent after Filtration	UF Water Treatment
1	P^H		6-8	5.5-9	7-8
2	COD	mg/l	100-600	Less than 100	Less than 20
3	TSS	mg/l	150-250	Less than 50	Less than 10
4	OIL&GEASE	mg/l	20-30	Less than 10	Less than 1
5	BOD5	mg/l	150-250	Less than 30	Less than 5

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28

4. SELECTION OF TREATMENT TECHNOLOGY:

The Hospital has a Sewage Treatment Plant for the total effluent/sewage streams mentioned above. A detailed analysis of the control system has been made in order to determine the effectiveness of the control system. The treatment unit virtually works on a 24-hour basis although the sewage discharges follow cycles with high peaks and low troughs depending on the time of the day due to the fact of being mostly originating from domestic activities.

The Effluent cum Sewage Treatment Plant has been designed and installed based on combined treatment process involving primary, secondary and tertiary treatment. The secondary and tertiary treatment section has been designed based on biological treatment of organic matters operated on a continuous mode.
Sewage treatment plant at above mentioned address is based on MBBR (Moving Bed) Bioreactor Technology, which offers promise of several advantages as follows:

1. Can be designed to any size to deal with larger flow and loads.
2. Fine bubble diffused aeration used generally reduces the energy requirements as compared to surface aerators.
3. Modular design allows easy installation.
4. The tank does not need to be drained for access to the diffusers or media.
5. MBBR system takes higher shock loads without reducing the plant performance because of large quantity of Biomass available in the reactor.
6. MBBR supports low sludge generation, low Odor and low visual impact.
7. Solids Retention Time (SRT) of can vary based on influent flow without negative process impact.
8. Less susceptible to upsets due to flow variations.
9. Reliable and consistent nitrification both in summer and winter operations.
10. Low power consumption (nearly 40 – 50% less than conventional system).
11. Very low skilled operations, control and maintenance requirement.
12. Trouble free operations even under difficult conditions.
13. Low sludge production and hence reduced odor and foul.
14. Lower concentration of residual suspended solids in treated water.
15. Improved corrugated PVC fills media is designed to have significantly reduced BOD load.

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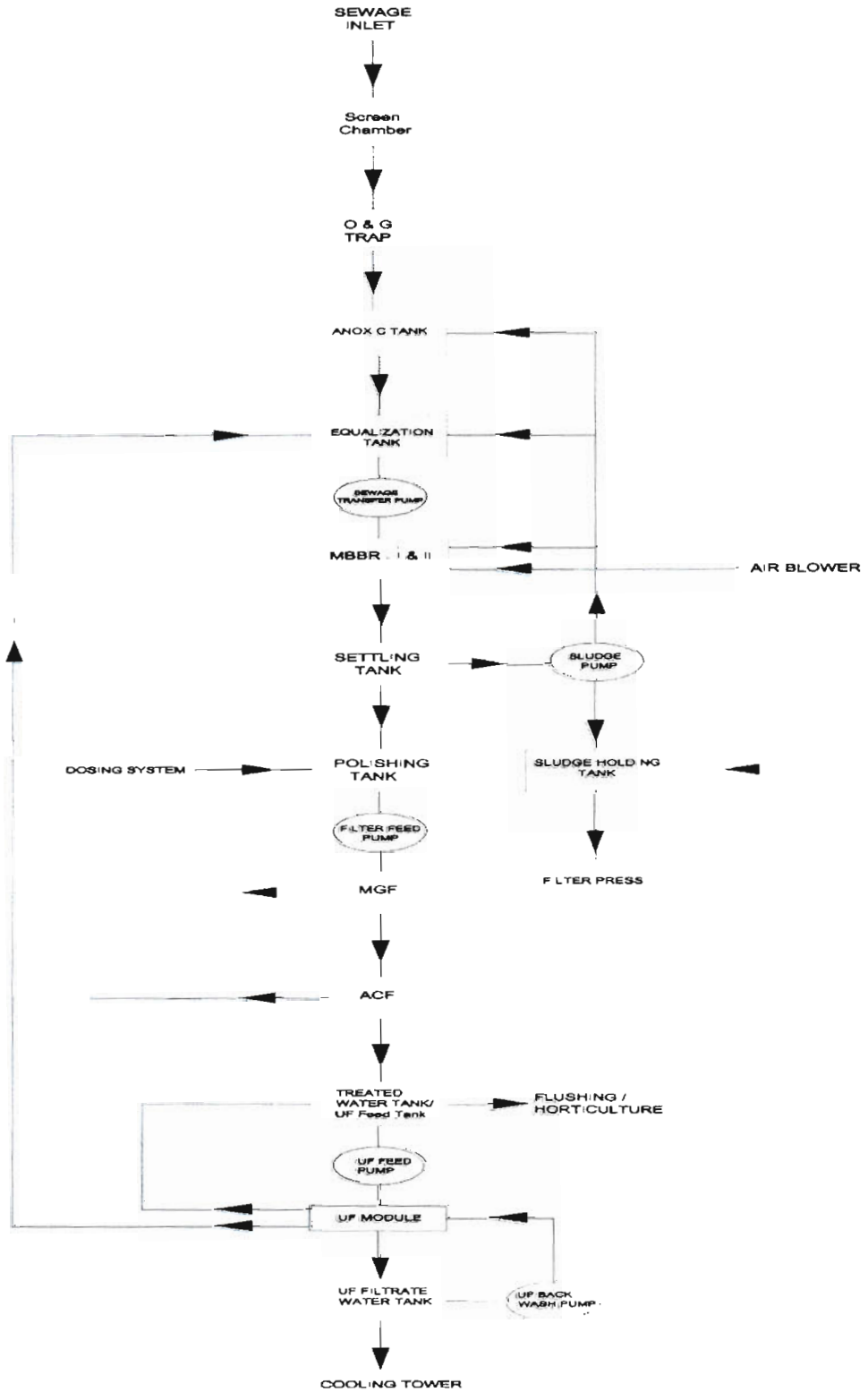
29

Treatment Scheme of Sewage Treatment Plant



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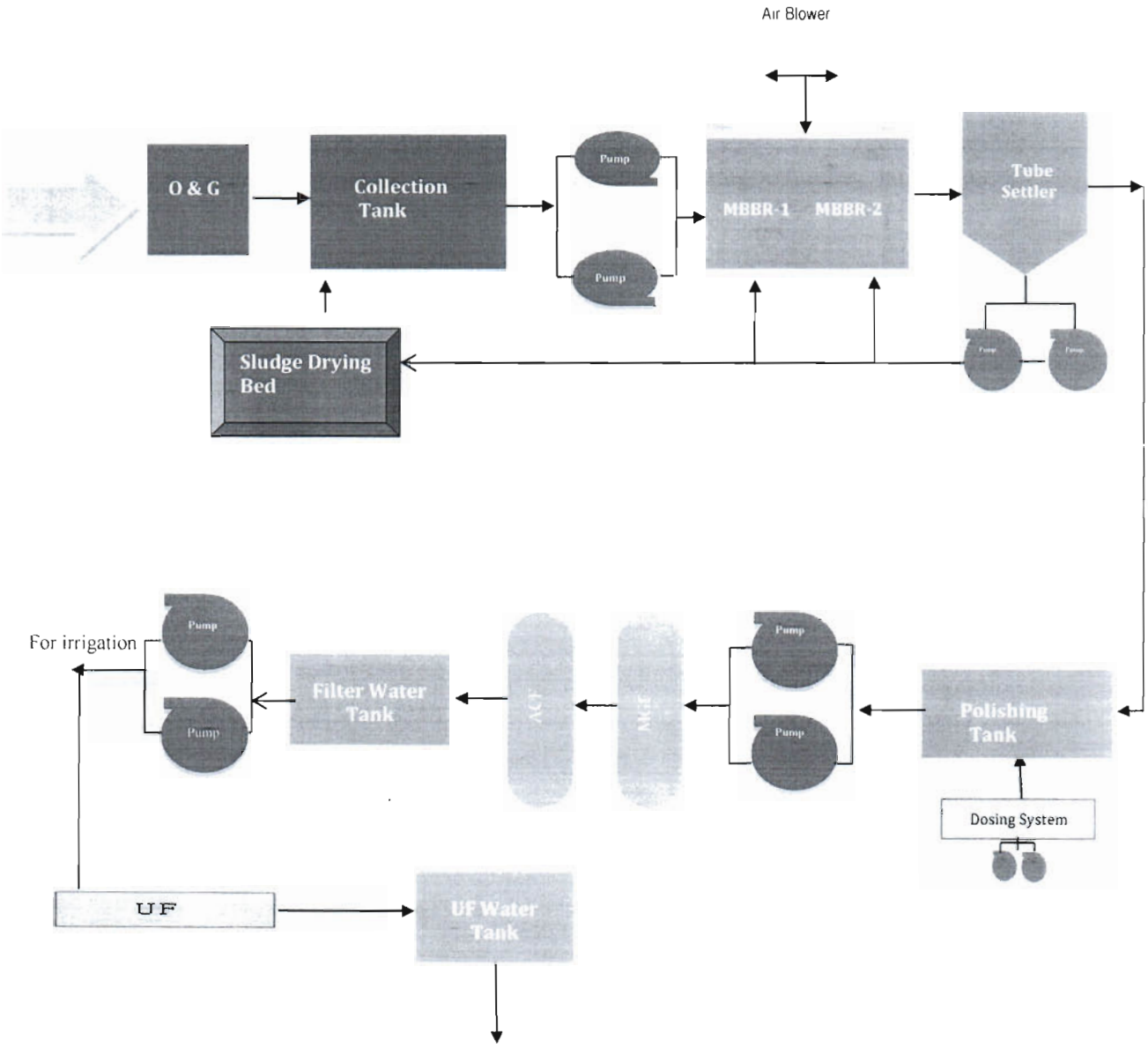
30

Sewage Treatment Plant Process Flow Scheme (Capacity:100KLD)



Flushing ,Cooling Tower &all other Activity

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31

5. TREATMENT PLANT PROCESS UNITS

The Sewage treatment plant has been designed based on continuous flow operation for the treatment of the sewage water. The sewage treatment plant consists of the following units:

I. Process Units
Screen Chamber
Oil & Grease Trap
Collection cum Equalization Tank
MBBR Reactor
Hopper Bottom Clarifier
Chlorine Contact Tank
Pressure Sand Filter
Activated Carbon Filter
Sludge Filter Unit

II. Mechanical Ancillary Units:
Raw Sewage Transfer Pump
Plant Room Drainage Pump
Air Blower
Aeration Grid
Fine Bubble Diffusers system
Bio Deck Media
Sludge Recirculation Pumps
Filter Feed Pumps
Irrigation Pump
Ultrafiltration

III. Electrical & Electronics Ancillary Units:

Electrical Control Panel

PH Meter,

Flow Meter

4. TREATMENT SCHEME

- **Bar Screen:** Raw sewage from the source is received into the bar screen chamber by gravity. Screen provided will remove all floating and big size

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32

matter such as plastics, polythene bags, glasses, stones etc; which may otherwise choke the pipeline and pumps.

- **O& G Trap :** An Oil and Grease Trap also known as Grease Trap, **Grease Interceptor** is a device used to trap oil, grease, food solids etc from the wastewater before they enter into a sewer system. The Oil and Grease Trap prevents the clogging of sewer by preventing the Oil, grease fats and solids from entering the sewer.

- **Collection-cum-Equalization Tank**: Usually, sewage generation is more during morning hours and evening hours. Visually no sewage is generated during night hours. Any biological system needs constant feed for bacteria to work efficiently. Hence, it is important to put an equalization tank to collect the excess flow during peak hours and feed sewage in lean hours. Provision of air grid is made for thoroughly mixing of sewage to make it of homogenous quality and to keep the suspended matter in suspension and to avoid septic condition.

- **Transfer of Sewage:** The sewage transfer pump of discharge rate 1.5 KL/hr is provided. The operation of the pump is controlled through level controller. The sewage is transferred to MBBR tank.

- **Moving Bed Bio Reactor Tank:** The Bio Reactor is based on the Fluidized Random Aerobic Reactor which combines the advantage of an Activated Sludge Plant with the Random distribution systems such as Biofilters. With capacities that could be as low as 1/10th of ASP and fractional power consumption, such a reactor is ideal for the efficient removal of BOD and organics from the wastewater.

  The tanks are packed with RIGID PP-UV-sterilized Gas Fluted Media with liquid random distribution wherein air diffusers are placed to uniformly release air across the tanks.

Bacteria grow rapidly in the Bio-Pac unit under properly engineered conditions. They consume organic chemical for their growth and remove them from the wastewater. The bacteria convert chemical into biological cells, which under proper growth conditions, form slims. The slims adhere to available surfaces and accumulate into what we call random biological film or fixed film. The high surface area-to-volume ratio of the units allows for accumulation of substantial

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33

concentration of bacteria in the relatively small reactor units. Further, the accumulated bacteria which provides high rates of removal or organic chemicals are fixed in the system and do not need to be recycled back to the basin.

In the Bio Reactor system, the water is constantly flowing through rigid PVC matrix to which the biological film attached. As the water flows past the biological film, bacteria in the film absorb organic chemicals as well as oxygen, nitrogen, phosphorus, and other trace nutrients required for their growth.

As the bacteria grow on the matrix and as more chemicals are added to the unit, the stationary biological film will continue to build in thickness. As the film becomes thicker the depth of penetration by diffusion of the absorbed material such as oxygen or other nutrients is not enough to reach the entire distance through the slime of the plastic media. At some point, the film will become sufficiently thick and portion of the film closest to the plastic media will not receive any food or nutrient, particularly oxygen. The inner layer of the film becomes anaerobic and the organisms lose their ability to adhere to the media surface. The shear forces of the water and / or air bubbles flowing through the matrix will ultimately become great enough to tear this portion of the biological film loose from the media. This process is called sloughing. The solids which slough from the media will flow out of the system with the effluents and are to be removed from the water through clarification in a settling module. The exposed portion of media surface will repeat the process of slime accumulation and sloughing.

In actual operation of the Bio Reactor units, biological film will be in a state of dynamic, continuous growth and sloughing. At any given time, portion of the media are always at some point between forming a new film sloughing. the biological film loose from the media. This process is called sloughing. The solids which slough from the media will flow out of the system with the effluents and are to be removed from the water through clarification in a settling module. The exposed portion of media surface will repeat the process of slime accumulation and sloughing. In actual operation of the Bio Reactor units, biological film will be in a state of dynamic, continuous growth and sloughing. At any given time, portion of the media are always at some point between forming a new film sloughing.

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34

❖ Working principal

The MBBR works on the same principle as the submerged fixed film process with only one exception - the media is not fixed and floats around in the aeration tank. The main advantage of this system over the submerged fixed film process is that it prevents choking of the media. This also avoids sludge recirculation. Compared to conventional technologies the MBBR is compact, energy efficient and user friendly. It also allows flexibility in design of the reactor tank.

- **Clarifier Tank:** This unit is provided to remove the settleable solids formed in MBBR tank. The unit is provided with a hopper bottom type clarifier in which the mixed liquor from the SAFF tank overflows. The sludge settles down and is continuously removed through sludge lifting pump. The clear water overflows into the chlorine contact tank.

- **Sludge Tank:** The sludge from the bottom of the clarifier is transferred to techno bag in which fabric cloth filters are attached. The filtrate from here is again sent back to the collection tank for its further treatment. The semi dried sludge is then kept for solar drying. After solar drying sludge is collected and stored separately for its further disposal/use as per applicable guidelines.

- **Polishing Tank:** In polishing tank, chlorination is done by dosing Sodium Hypochlorite solution 6-10% concentration for the dis-infection of biologically treated sewage. The dis-infected treated sewage is then lifted and fed to filtration unit. Filtration unit consists of pressure sand filter followed by activated carbon filter for removal of residual suspended particles.

- **MGF &ACF**: The treated water of Polishing Tank. Passes through Sand filter and ACF is used as per requirement

- **ULTRA FILTRATION**
  Ultrafiltration (UF) is a variety of membrane filtration in which forces such as pressure or concentration gradients lead to a separation through a semipermeable membrane. Suspended solids and solutes of high molecular weight are retained in the so-called retentate, while water and low molecular weight solutes pass through the membrane in the permeate (filtrate). This separation process is used in industry and

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35

research for purifying and concentrating macromolecular (10^3–10^6 Da) solutions, especially protein solutions.

6. SPECIFICATIONS OF EQUIPMENTS

A-Electro-Mechanical Equipment

S.no	Equipment	MOC	Specification	Make	Quantity
1	Bar Screen	SS-304	Perforated screens of 10 mm & 8 mm in suitable ss Frame with lifting arrangement	SMEE	1 SET
2	SITC Raw Sewage, Transfer Pump,	CI	5M^3/hr @1 Kg Flow Rate having CI casing & shaft, CI impeller complete with all accessories,	Willo/Kirlosker	2(1w+1s)
3	SITC Air Blower	CI	130M^3/hr @5mmwg operated on 1200 rpm	Rootech/ Akash /EVEREST driven by 1440 Rpm ABB Motors	2(1w+1s)
4	SITC Air Piping	GI /UPVC	B Class/ schedule 40	Zindal / Astral	lot
5	SITC Diffusers	EPDM	length 1000 mm Dia 63 mm grooved, wall thickness 2mm & Air flow 8-9 M^3	JAGER , Italy	lot
6	SITC MBBR Media	PVC	350M^2@M^3(minimum 60,000 pieces) with density	SDM /SASS /Equiv	13M^3
7	SITC Tube deck Media	PVC	Hexagonal shSMEE height 750 mm	SDM/SASS	5 M^3
8	SITC Sludge Recirculation Pump	CI	5 M^3/hr@1.kg Self Priming Non Clog	Willo/Kirlosker	2(1w+1s)
9	SITC Filter Feed Pump	CI	10 M^3/hr@2.5Kg Mono Block at 1400 Rpm	Willo/Kirlosker	2(1w+1s)
10	SITC Activated Carbon Filter	FRP	5 M3/hr@ 12m3per M^2 FRP Model	Pentair/TATA/Equivalent	1

TC

36

11	Multi grade Sand Filter	FRP	5 M3/hr@ 12m3per M^2	Pentair/TATA/Equivalen t	1
14	Plant Piping & Fittings	UPV C/GI	Schedule 40	Astral	lot
16	Chlorine Dosing System	PP	0-6 LPH	SMEE with E Dose Pump	1
17	Electrical Panel		Details attached	Ess Tee Power	1
18	Cable and Cable Tray	Copp er PVC	3 core 2mm thick Armored copper wire	Poly cab	lot
19	Filter Press		18x18x18	SMEE/HIGHTEK	
20	Screw Pump	CI-SS	$1M^3$/Hr @ 30 meter driven By 1 hp motors	Roto /Equivalent's	1
21	Electromagnetic Flow Meter	MS	1-10 M3/Hr	E&E/ Ester/Energiser	1
22	Outlet Digital Flow Meter	PVC	1-10 M3/Hr	E&E/ Ester/Energiser	1
23	PH meter		0-14 PH		
24	Pressure Gause, Floty Valve To Make System Automatic				
25	Erecting & Commissioning				
26	Transportation				

B Ultra Filtration System

S.No	Equipment	Specifications	Make	MOC	Quantity
1	Strainer	100 Micron	SMEE	PVC	1
2	UF Feed Pump	6 m3/hr@30m head	Wilo	SS 304	2
3	Bag Filter	100 Micron	SMEE	uPVC	1
4	UF Module	77 m2	DuPont/ Equivalent	PVDF	2
5	Dosing Pump	0-6 LPH @ 35m Head	E Dose	PP	3
6	Dosing Tank	CV Chemical Tank 100 L	Sintex	HDPE	3

TC

37

7	UF Backwash Pump	20 m3/hr@ 25m Head	Wilo	SS 304	2
8	Backwash MCF	05 Micron	SMEE	uPVC	1
9	CIP Pump	10 m3/hr@ 25m Head	Wilo	SS	1
10	CIP MCF	05 Micron	SMEE	UPVC	1
11	Interconnecting Pipeline	25mm NB	Astral	UPVC	1
12	Air Blower	20 m3/hr @ 06 m Head	Everest /Aksh	CI	1
13	UF CIP Tank	500L	Sintex	PVC	1
14	UF Skid	MSEP	SMEE	MSEP	1
15	UF Control Panel	Select	SMEE		1
16	UF Electrical cabling	mm cable	Poly Cabe	Copper	1
17	Rota meter	0-6 m3/hr	Aster		3
18	Pressure Guage	0-5 KG/cm2	Aster		3
19	Solenoid Valves		UFlow		6
20	Differential Pressure Switch	0-4 Kg/cm2	Danfoss. Equivalent		1

C. Skid Mounted MS FRP Tank

S.No.	Tank	Quantity	Capacity	MOC & Specification
1	MBBR Reaction Tank	2	2x 17 M3=34 M^3	6 mm thick MS sheet mounted on base channel of 125 x 65 , with 3 No. stiffener size 100 x 50 middle and top(Coated with 2 mm FRP inner coat & epoxy outer side and
2	Tube Settler	1	10 M3	"
3	Polishing /Chlorination Tank	1	8 M3	"
4	Filter water tank/UF Feed Tank	1	10 M3	"
5	U F water storage tank	1	10 M3	"
6	Ladder with handrail walkway Plat Form	Lot		

D. Existing MSFRP/ Civil Work

S. No.	Tank	Quantity	Capacity	Size in Meter	MOC
1	Bar Screen, Oil & G Chamber	1	$2M^3$		Existing
2	Collection. Equalization tank	1	$20M^3$		Existing

TC

38

	Sumps				
3	Sludge Holding Tank	1	$5M^3$		Existing
4	CC Plat form	1			CC Existing

7. OTHER ELECTRICAL COMPONENTS

These are used of standard company make of adequate capacity as per the requirement. As the S.T.P is designed for its 20 hrs. continuous operation, each electrical component is used with additional stand by unit to operate on alternate basis.

8. SLUDGE HANDLING

Sludge collected from the Filter Press should be sun dried and collected in the bags sealed and disposed of as per applicable guidelines.

9. SUMMARY OF TREATMENT PROCESS UNITS AND THEIR TECHNICAL ADEQUACY

The treatment process units are described above are summarized and presented in table above. The table shows the status of the equipment and process units in terms of their adequacy for the treatment of the sewage. The table also indicates that the process units are technically adequate for the operation of the Effluent-Sewage treatment plant giving a consistent operational result.

10. CONCLUSION

It is obvious from the detail described above, the STP seems adequate as well as efficient to treat 100 KLD sewage water (for 20 hours operation/ day)

TC

39

To meet the regulatory requirements of Central & State Pollution Control Board. The different sub-units of the S.T.P. are of adequate capacity to treat the 100 KL sewage effluent generated per day. The unit is advised to manage the sludge as per applicable rules. In addition, the unit is advised to maintain daily logbook for quantifying the actual daily discharge.

TC

Ujala Cygnus HEALTHCARE SERVICES
Ujala Cygnus Central Hospital Haldwani
www.ujalacygnus.com

ANNEXURE - R-4

40

सेवा में,
क्षेत्रीय अधिकारी महोदय
उत्तराखंड प्रदूषण नियंत्रण बोर्ड (UKPCB)
हल्द्वानी

दिनांक: 14 जनवरी 2026

विषय: STP/ETP री-मैपिंग रिपोर्ट प्रस्तुत करने एवं वैधानिक पर्यावरणीय अनुपालन के संबंध में

महोदय,

सादर अवगत कराना है कि हमारे संस्थान में स्थापित सीवेज ट्रीटमेंट प्लांट (STP) एवं एफ्लुएंट ट्रीटमेंट प्लांट (ETP) की री-मैपिंग रिपोर्ट, पर्यावरण संरक्षण अधिनियम, 1986, जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1974 तथा UKPCB द्वारा निर्धारित मानकों एवं दिशा-निर्देशों के अनुरूप तैयार कर प्रस्तुत की जा रही है।

उक्त री-मैपिंग से संबंधित समस्त कार्यवाही लगभग 4–5 माह की अवधि में पूर्ण की जाएगी। कार्य पूर्णोपरांत उत्पन्न समस्त अपशिष्ट जल का उपचार निर्धारित डिस्चार्ज मानकों के अनुरूप किया जाएगा एवं ट्रीटेड जल का अधिकतम पुनः उपयोग (Reuse) सुनिश्चित किया जाएगा।

किसी अपरिहार्य स्थिति में यदि ट्रीटेड जल का टैंकर द्वारा निष्कासन किया जाता है, तो यह पूर्णतः उपचारित, नियमानुसार परीक्षणित एवं कृषि उपयोग योग्य मानकों के अनुरूप होगा, जिससे किसी भी प्रकार का पर्यावरणीय प्रदूषण न हो।

अतः आपसे अनुरोध है कि प्रस्तुत रिपोर्ट को अभिलेख में लेते हुए आवश्यक दिशा-निर्देश प्रदान करने की कृपा करें।

भवदीय,

डॉ. नवनीत
असिस्टेंट मेडिकल सुपरिटेंडेंट

उजाला सिग्नस सेंट्रल हॉस्पिटल

16/01/26

TC

NOIDA TESTING LABORATORIES LLP

(A Government of India Approved Testing Laboratory)

(An ISO : 9001 : 2015, ISO 45001 : 2018 (OH&S) Certified & NABL Accredited Laboratory)

MoEF, CC (Ministry of Environment, Forest & Climate Change) and UPPCB Recognized Laboratory

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TEST CERTIFICATE

41

Issued To: M/s Ujala Cygnus Central Hospital **Address:** Kaladhungi Road, Near Gas Godam, Tiraha, Kusumkhera, Haldwani Uttarakhand 263139	**Report Code** : WW-110226-016 **Test Report of** : Waste Water **Discipline** : Pollution & Environment **Service Request No** : NTL/SRF/02/26-05 **Service Request Date** : 09/02/2026 **Report Issue Date** : 16/02/2026

SAMPLING & ANALYSIS DATA

Sample Drawn On	:	10/02/2026
Sample Received On	:	10/02/2026
Sample Drawn By	:	NTL Representative
Sample Description	:	**STP Outlet**
Sample Quantity/Packing detail	:	1 lt. Plastic Cane/Glass Bottle
Weather Conditions	:	Normal
Analysis Duration	:	11/02/2026 to 16/02/2026
Sampling Procedure	:	NTL/LAB/W-WATER/SOP-002

TEST RESULTS

S. No.	Parameter	Test Method	Results	Units	Limits as per CPCB norms
1.	pH @ 25°C	IS:3025(Part-11)	7.52	-	5.5-9.0
2.	Total Suspended Solids at 105°C	IS:3025(Part-17)	16.0	mg/l	100.0
3.	Chemical Oxygen Demand (as O_2)	IS:3025(Part-58)	85.0	mg/l	250.0
4.	Biological Oxygen Demand (for 3 days at 27±1°C)	IS:3025(Part-44)	18.0	mg/l	30.0
5.	Oil & grease	IS:3025(Part-39)	BDL (<4.0)	mg/l	10.0

Remarks: Test parameters coming in under limit, prescribe limits are given by MoEF/Central Pollution Control Board.

***Remarks:** BDL- Below Detection Limit.

Notes:

1. The results given above are related to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
2. Responsibility of the Laboratory is limited to the invoiced amount only.
3. This test report will not be generated again, either wholly or in part, without prior written permission of the laboratory.
4. The test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.

CHECKED BY

AUTHORIZED SIGNATORY

NOIDA TESTING LABORATORIES LLP ★ NTL

TC

HEAD OFFICE
Uttarakhand Pollution Control Board
"Gaura Devi Paryavaran Bhawan"
46B, IT Park, Sahastradhara Road, Dehra Dun
E-mail : msukpcb@yahoo.com, Phone No.-0135-2607092

42

UKPCB/HO/C&M/K-210/2026/ Dehradun, February, 2026

SPEED POST

To,

M/s Ujala Signus Central Hospital,
Gas Godam Tiraha,
Kusumkheda, Haldwani,
Distt- Nainital.

Non-compliance of the Bio-Medical Waste Management Rules, 2016.

WHEREAS, the Government of India has promulgated the **Bio-Medical Waste Management Rule 2016 (BMW Rules 2016)**, under the **Environment (Protection) Act 1986**; and it is mandatory requirement of every Health Care Facilities (HCFs) to comply with the provisions of the said **Rules**, and

WHEREAS, M/s Ujala Signus Central Hospital located at **Gas Godam Tiraha, Kusumkheda, Haldwani, Distt- Nainital** (herein after referred as "**Health Care Facility "HCF"**) is a health care facility; and

WHEREAS, Rules-4 of the **Bio-medical Waste Management Rules, 2016** defines duties of Occupier, amongst others; it shall be duty of every occupier to:

(a) Take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with these rules;
(b) Make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule-I of BMW Rules, 2016, to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule-I;
(c) Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilisation on-site in the manner as prescribed by the World Health Organisation (WHO) or National AIDs Control Organisation (NACO) guidelines and then sent to the common bio-medical waste treatment facility for final disposal;
(d) Phase out use of chlorinated plastic bags, gloves and blood bags within two years from the date of notification of these rules;
(e) Dispose of solid waste other than bio-medical waste in accordance with the provisions of respective waste management rules made under the relevant laws and amended from time to time;
(f) Not to give treated bio-medical waste with municipal solid waste;
(g) Provide training to all its health care workers and others, involved in handling of bio medical waste at the time of induction and thereafter at least once every year and the details of training programmes conducted, number of personnel trained and number of personnel not undergone any training shall be provided in the Annual Report;
(h) Immunise all its health care workers and others, involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus that are likely to be transmitted by handling of bio-medical waste, in the manner as prescribed in the National Immunisation Policy or the guidelines of the Ministry of Health and Family Welfare issued from time to time;
(i) Establish a Bar- Code System for bags or containers containing bio-medical waste to be sent out of the premises or place for any purpose within one year from the date of the notification of these rules;

TC

(j) Ensure segregation of liquid chemical waste at source and ensure pre-treatment or neutralisation prior to mixing with other effluent generated from health care facilities;
(k) Ensure treatment and disposal of liquid waste in accordance with the Water Prevention and Control of Pollution) Act, 1974 (6 of 1974);
(l) Ensure occupational safety of all its health care workers and others involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipments;
(m) Maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in Schedule-I;
(n) Report major accidents including accidents caused by fire hazards, blasts during handling of bio-medical waste and the remedial action taken and the records relevant thereto, (including nil report) in Form I to the prescribed authority and also along with the annual report;
(o) Make available the annual report on its web-site and all the health care facilities shall make own website within two years from the date of notification of these rules
(p) Inform the prescribed authority immediately in case the operator of a facility does not collect the bio-medical waste within the intended time or as per the agreed time;

WHEREAS, according to **Rule-7** of the **BMW Rules, 2016**, the Bio-medical waste shall be treated and disposed of in accordance with **schedule-I** and in compliance with the standards provided in **schedule-II** by the Health Care Facilities and Common Bio-medical Waste Treatment Facility; and

WHEREAS, Rule-8, of the **BMW Rules, 2016** describes segregation, packaging, transportation and storage of Bio-medical waste; and stipulated that no bio-medical waste shall be mixed with other waste; and

WHEREAS, according to the **Rule-10** of the **BMW Rules, 2016**, every occupier, or operator handling Bio Medical Waste, irrespective of the quantity shall make an application in **Form-II** to the **prescribed authority** i.e. State Pollution Control Board for grant of authorization; and

WHEREAS, according to the **Rule-13** of the **BMW Rules, 2016**- "Every occupier or operator of Common Bio-Medical Waste Treatment Facility shall submit an Annual Report to the prescribed authority in Form-IV, on or before the 30th June of every year; and

WHEREAS, according to the **Rule-18** of the **BMW Rules, 2016**, the occupier or an operator of the Common Bio Medical Waste Treatment Facility shall be liable for all the damages caused to the environment or the public due to improper handling of Bio-medical waste; and

WHEREAS, the **Hon'ble National Green Tribunal (NGT)** in its order dated 19.07.2016 in the matter of *M.C. Mehta Vs. Union of India and Ors; Anil Kumar Singhal Vs. Union of India and Ors; and Society for Protection of Environment & Biodiversity & Anr Vs. Union of India and Ors.* directed that:

"We hereby direct the State Government to impose an Environmental Compensation of Rs 50,000 on each hospital which is not having complete arrangement for disposal and regular dumping of Bio medical Waste in accordance with law with the Bio Medical Waste Rules 2006."

WHEREAS, according to the **Section-5** of the **Environment (Protection) Act, 1986:**

"Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions"

WHEREAS, the Ministry of Environment, Forests and Climate Change, Govt. of India has delegated the power vested in it under **section-5** of the **Environment Protection Act, 1986** to the State Govt. of Uttar Pradesh vide notification no. 1(38)/86-pl dated April 14, 1988; and

WHEREAS, the Government of Uttarakhand vide its G.O. dated 26.07.2016 authorized the Uttarakhand Environment Protection and Pollution Control Board to impose and collect the Environmental Compensation on each hospital which are not having complete arrangement for disposal of Bio-Medical Waste; and

44

WHEREAS, in reference of the complaint received against the Hospital inspection of **M/s Ujala Signus Central Hospital** located at **Gas Godam Tiraha, Kusumkheda, Haldwani, Distt- Nainital** was visited by the official of the Regional Office, Nainital of this **Board** on **03.12.2025** in presence of Hospital's representative, Dr. Navneet and made following observations :-

1. चिकित्सालय में 150 बैड स्थापित/संचालित है तथा चिकित्सालय में विभिन्न श्रेणियों का जैव चिकित्सा अपशिष्ट जनित होता है। निरीक्षण के दौरान चिकित्सालय द्वारा जनित जैव चिकित्सा का निस्तारण संबंधित बार कोडिंग आदि प्रपत्र प्रस्तुत नहीं किये गये।
2. निरीक्षण के दौरान चिकित्सालय में जैव चिकित्सा अपशिष्ट को बिना पृथक्करण करे कलर कोडेड बिन में रखा जा रहा था तथा जनित जैव चिकित्सा अपशिष्ट के निपटान हेतु ग्लोबल इन्वायरमेंट सोल्यूशन गदरपुर (उधमसिंहनगर) के साथ अनुबंध किया गया है।
3. चिकित्सालय में प्रयोगशाला तथा ओ0टी0 से जनित उत्प्रवाह के उपचार हेतु परिसर में 10 के0एल0डी0 क्षमता का ई0टी0पी0 तथा घरेलू उत्प्रवाह के उपचार हेतु 100 के0एल0डी0 क्षमता का एस0टी0पी0 स्थापित है। निरीक्षण के दौरान उपचार संयंत्र सुचारू रूप से संचालित नहीं किये जा रहे थे।
4. निरीक्षण के दौरान ई0टी0पी0 व एस0टी0पी0 के संयुक्त उत्प्रवाह निस्तारण बिन्दु से अन्तिम उत्प्रवाह का नमूना एकत्रित कर कार्यालय की प्रयोगशाला में विश्लेषित किया गया। जिसकी विश्लेषण आख्या बोर्ड मानकों के अनुरूप नहीं पायी गयी।
5. चिकित्सालय प्रतिनिधि द्वारा अवगत कराया गया कि चिकित्सालय द्वारा घरेलू उत्प्रवाह का अधिक मात्रा में जनित होने के कारण अन्तिम उत्प्रवाह को टैंकरों के माध्यम से उत्तराखण्ड पेयजल निगम द्वारा स्थापित संयुक्त सीवर लाईन में निस्तारित किया जाता है। जिस सम्बन्ध में चिकित्सालय द्वारा निरीक्षण के दौरान प्रपत्र नहीं किये गये।

As such it is evident from above observation that the health Care Facility (HCF) has violated the provisions of the Biomedical Waste Management Rules, 2016 and the Environment (Protection) Act, 1986 and Rules made thereunder.

NOW THEREFORE, in exercise of the power conferred under **Section-5 of Environment (Protection) Act, 1986** as amended with approval of the competent authority of the Board, **M/s Ujala Signus Central Hospital** located at **Gas Godam Tiraha, Kusumkheda, Haldwani, Distt-Nainital** is hereby directed to Show Cause within 30 days of time from issue of this direction, as to why **environmental compensation (at the rate of ₹7500/day till compliance) in compliance of order of the Hon'ble NGT in the matter of OA no. 593/2017 and subsequent decision and procedure adopted by the State Board in its 23rd Board meeting, be not imposed against the hospital and closure order be issued under the provisions of the Environment (Protection) Act, 1986 as amended, and concerned authority(ies) be directed to discontinue the power/water supply of the hospital?**

In case of default in compliance with the above directions by the HCF, the UKPCB will be constrained to initiate appropriate actions against the occupier(s) of the HCF without giving any further notice, in accordance with provisions of the **Environment (Protection) Act, 1986**.

Digitally signed by
PARAG MADHUKAR DHAKATE
Date: 05-02-2026 16:42:16

(Dr. Parag Madhukar Dhakate)
Member Secretary

Letter No. :UKPCB/HO/C&M/K-210/2026/ **Dated: as above**

Copy to :-

1. Regional Officer, Uttarakhand Pollution Control Board, Haldwani for information and necessary compliance.
2. CMO, Nainital for information please.
3. Account section
4. Guard File.

Member Secretary

TC

ANNEXURE-R-7

45

DATE: 06.04.2026

Dr Parag Madhukar Dhakate,

Member Secretary,

Uttarakhand Pollution Control Board,

Gaura Devi Paryavaran Bhawan,

46B, IT Park, Sahastradhara Road, Dehradun- 248013

SUBJECT: REPLY TO SHOW CAUSE NOTICE DATED 5th FEBRUARY 2026 VIDE UKPCB/HO/C&M/K-210/2026.

Sir,

This is in response to the show cause notice dated 5th February, 2026, received on 07th March 2026, issued by your office alleging certain non – compliances under the Bio-medical waste Management Rules, 2016 and Water (Prevention & Control of Pollution) Act, 1974. We wish to state the following:

1 That Ujala Cygnus Central Hospital, Kaladhungi Road, Tiraha, near Gas Godam, Kusumkhera, Haldwani, Uttarakhand-263139 here in referred to as the "Hospital" is a multi-speciality 150 bedded hospital providing essential healthcare services to the public at large and has always been committed to complying with all applicable environmental laws and regulations.

2 That the Hospital is duly authorized and operating strictly in accordance with statutory permissions granted by the Uttarakhand Pollution Control Board. The Board has issued Authorization under Rule 10 of Bio-Medical Waste Management Rules, 2016 and Consent to Operate under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974, Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 dated 23.09.2023 which is valid till 31.03.2028.

3 That the point wise reply of the observations made by the Board in the Show Cause Notice are as follows:

Point 01.

All BMW records have already been fully compiled and updated. A structured documentation

TC

46

system is followed across all departments, incorporating records of the waste generated and the waste is handed over to the CBWTF through barcode-based tracking system. Responsibility for maintaining these records has been clearly assigned to designated staff. Copies of records (Barcode scanning report from 15th December, 2025 to 27th March, 2026) have been Annexed as **ANNEXURE - A**.

It is regretted that on the day of the visit the records could not be shown as the concerned person was immediately not available.

Point No. 2:

It is stated that we are diligently segregating the Bio-Medical waste through Color-coding as prescribed under the BMW Rules, 2016 and the nursing, housekeeping, laboratory and other staff are being trained for proper segregation. The segregated biomedical waste is handed over to the Global Environment Solutions, Gadarpur (Udham Singh Nagar), which is an authorized CBWTF, for further treatment and disposal.

Point 03:

The ETP and STP are being operated regularly, however remapping and upgradation of the plant is under progress and shall be completed on 30th June 2026.

Independent technical feasibility report prepared by S.M. Environmental Equipments, New Delhi, in respect of the 10 KLD Effluent Treatment Plant (ETP) installed at the Hospital, concludes that the ETP system is technically adequate and efficient. The discharge from the ETP is further treated in the STP of 100 KLD capacity installed in the Hospital. The copy of the report is annexed herewith as **ANNEXURE - B.**

In addition, the technical feasibility report in respect of the 100 KLD Sewage Treatment Plant (STP) installed at the Hospital premises, prepared by S.M. Environmental Equipments, New Delhi, concludes that the STP is technically adequate and efficient to treat 100 KLD sewage water (approximately 20 hours operation per day), and fully capable of meeting the regulatory

TC

47

requirements prescribed by the Central Pollution Control Board and State Pollution Control Board. The copy of the report is annexed herewith as **ANNEXURE - C.**

Point 04:

Necessary corrections in chemical dosing have been implemented to ensure the proper functioning of the treatment process. The overall process has been optimized to achieve improved treatment results. Copy of the latest effluent testing report dated 16.02.2026 from an authorized laboratory is Annexed as **ANNEXURE - D** which shows the parameters in the treated effluent to be within the prescribed limits.

Point 05.

The ETP and STP installed (with capacity 10 KLD and 100 KLD respectively) in the Hospital is as per the prescribed conditions under Consent to Operate & Authorization issued on 23.09.2023 However, over the years it is observed that the actual discharge of effluent is higher than the estimated quantity assumed while installing ETP and STP Therefore, upgradation of STP and ETP is currently in progress. The process shall be completed by 30th June, 2026

Keeping above in mind, even prior to the issuance of the present show cause notice, the Hospital had already initiated proactive compliance measures and duly informed the Board that:

- Re-mapping and upgradation of ETP/STP systems was under process
- Work would be completed within 4–5 months
- Treated water would meet prescribed discharge standards and shall be reused

Copy of the letter dated 14.01.2026 addressed to UKPCB is Annexed as **ANNEXURE – E.**

4. In view of the above facts, it is respectfully requested that no action be taken against the Hospital, as it has duly submitted its reply to the said show cause notice within the stipulated timeline and Hospital is in the process of upgrading its STP and ETP facilities as well It is further submitted that the hospital is complying with all the conditions, which are mentioned in Bio-Medical Waste Management Rules, 2016 and the Environment (Protection) Act, 1986 and Rules made thereunder

48

In view of the above statements, it is requested to withdraw the proposed action for Closure and Imposition of Environmental Compensation and grant time up to 30th June, 2026 for upgradation of ETP and STP installed in the Hospital

Regards,

Name: Abhishek Dubey

Designation: Unit Head

Date: 06/09/2024

Copy to:

1. **Regional Office (RO), Haldwani**
2. **Uttarakhand Pollution Control Board (UKPCB), Haldwani**

TC

49

CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH6607
HCF Weight: 042.042
CBWTF Weight: 000.000
Difference Weight: 042.042
HCF Address: 101, Best Hospital in, Central hospital, near
CBWTF Address:
Date: 2025-12-26

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

11

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH6607
HCF Weight: 046.481
CBWTF Weight: 000.000
Difference Weight: 046.481
HCF Address: 101, Best Hospital in, Central hospital, near
CBWTF Address:
Date: 2025-12-15

HCF	3	3	3	2

TC

50

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH660
HCF Weight: 7
CBWTF Weight: 070.070
Difference Weight: 000.000
HCF Address: 070.070
CBWTF Address: 487, Kaladhungi Rd, Shiv Puram Phase -I,
Date: 2026-01-05

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH660
HCF Weight: 7
CBWTF Weight: 080.080
Difference Weight: 000.000
HCF Address: 080.080
CBWTF Address: 487, Kaladhungi Rd, Shiv Puram Phase -I,
Date: 2026-01-03

HCF	1	1	1	1
CBWTF				

8
TC

S1

2:23

Reports

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	062.062
CBWTF Weight:	000.000
Difference Weight:	062.062
HCF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
CBWTF Address:	--- --- ---
Date:	2026-01-07

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	062.062
CBWTF Weight:	000.000
Difference Weight:	062.062
HCF Address:	Dhar bithoria no 1, near Hari ata chakkki,
CBWTF Address:	--- --- ---
Date:	2026-01-06

HCF	1	1	1	1
CBWTF	0	0	0	0

TC

S2

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH6607
HCF Weight: 067.067
CBWTF Weight: 000.000
Difference Weight: 067.067
HCF Address: 6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I, ----
CBWTF Address:
Date: 2026-01-21

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH6607
HCF Weight: 066.066
CBWTF Weight: 000.000
Difference Weight: 066.066
HCF Address: 6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I, ----
CBWTF Address:
Date: 2026-01-12

HCF	1	1	1	1
CBWTF				

TC

2:23

Reports

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	069.069
CBWTF Weight:	000.000
Difference Weight:	069.069
HCF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
CBWTF Address:	
Date:	2026-02-26

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	067.067
CBWTF Weight:	000.000
Difference Weight:	067.067
HCF Address:	101, Best Hospital in, Central hospital, near
CBWTF Address:	
Date:	2026-02-20

HCF	1	1	1	1
CBWTF	0	0	0	0

TC

54

2:23

Reports

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH660
HCF Weight: 7
CBWTF Weight: 059.059
Difference Weight: 000.000
HCF Address: 059.059
CBWTF Address: 101, Best Hospital in, Central hospital, near
Date: 2026-02-12

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

6

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code: UJALA263139UTBH660
HCF Weight: 7
CBWTF Weight: 096.096
Difference Weight: 000.000
HCF Address: 096.096
CBWTF Address: 6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
Date: 2026-01-27

HCF	1	3	1	1
CBWTF	0	0	0	0

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TC

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2:23

Reports

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	068.068
CBWTF Weight:	000.000
Difference Weight:	068.068
HCF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
CBWTF Address:	
Date:	2026-03-18

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	063.063
CBWTF Weight:	000.000
Difference Weight:	063.063
HCF Address:	101, Best Hospital in, Central hospital, near
CBWTF Address:	
Date:	2026-03-11

HCF	1	1	1	1
CBWTF	0	0	0	0

TC

S6

2:23

Reports

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH660
HCF Weight:	7
CBWTF Weight:	066.066
Difference Weight:	000.000
HCF Address:	066.066
CBWTF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
Date:	2026-03-23

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH660
HCF Weight:	7
CBWTF Weight:	067.067
Difference Weight:	000.000
HCF Address:	067.067
CBWTF Address:	6GP4+56H, Shiv Puri, Haldwani, Uttarakhand
Date:	2026-03-19

HCF	1	1	1	1
CBWTF	0	0	0	0

TC

S7

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH660
HCF Weight:	7
CBWTF Weight:	066.066
Difference Weight:	000.000
HCF Address:	**066.066**
CBWTF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I, --- --- ---
Date:	2026-03-23

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH660
HCF Weight:	7
CBWTF Weight:	067.067
Difference Weight:	000.000
HCF Address:	**067.067**
CBWTF Address:	6GP4+56H, Shiv Puri, Haldwani, Uttarakhand --- --- ---
Date:	2026-03-19

HCF	1	1	1	1
CBWTF	0	0	0	0

TC

58

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	062.062
CBWTF Weight:	000.000
Difference Weight:	**062.062**
HCF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
CBWTF Address:	--- --- ---
Date:	2026-03-27

HCF	1	1	1	1
CBWTF	0	0	0	0

TOTAL(P)

4

UJALA CYGNUS CENTRAL HOSPITAL

Hospital Code:	UJALA263139UTBH6607
HCF Weight:	066.066
CBWTF Weight:	000.000
Difference Weight:	**066.066**
HCF Address:	6GC4+X6Q, Kaladhungi Rd, Shiv Puram Phase -I,
CBWTF Address:	--- --- ---
Date:	2026-03-23

HCF	1	1	1	1
CBWTF	0	0	0	0

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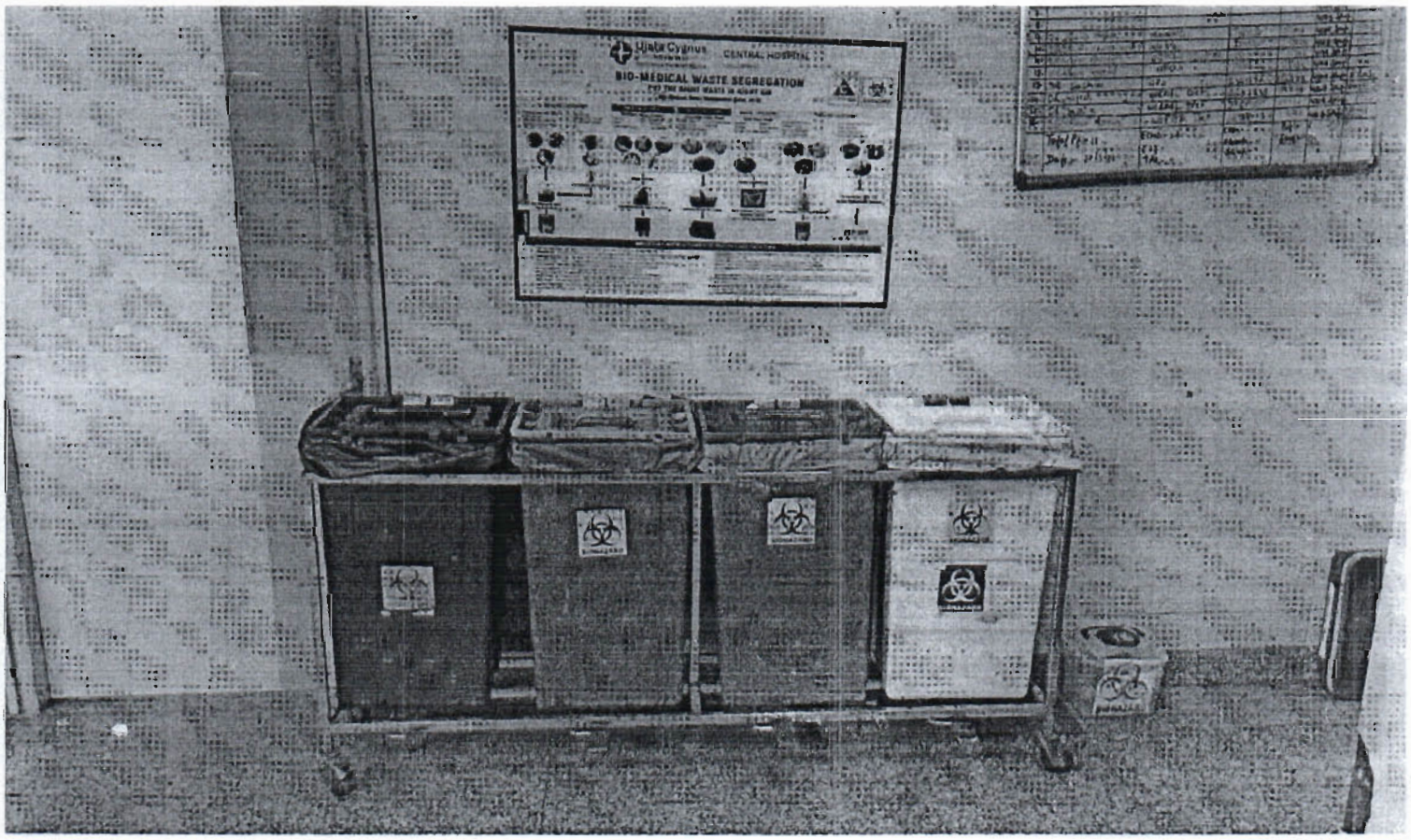
59



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Ujala Cygnus
CENTRAL HOSPITAL
BIO-MEDICAL WASTE SEGREGATION

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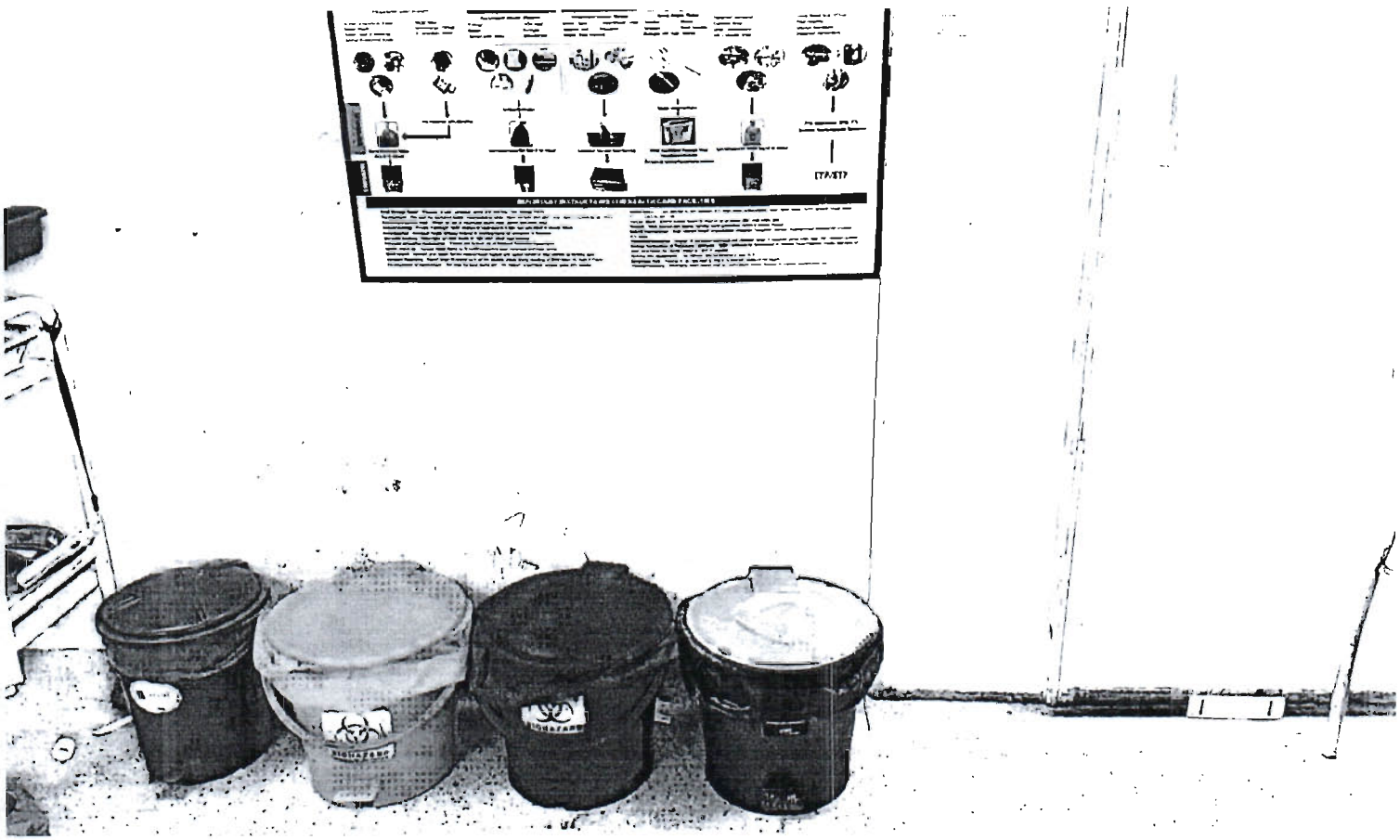
61



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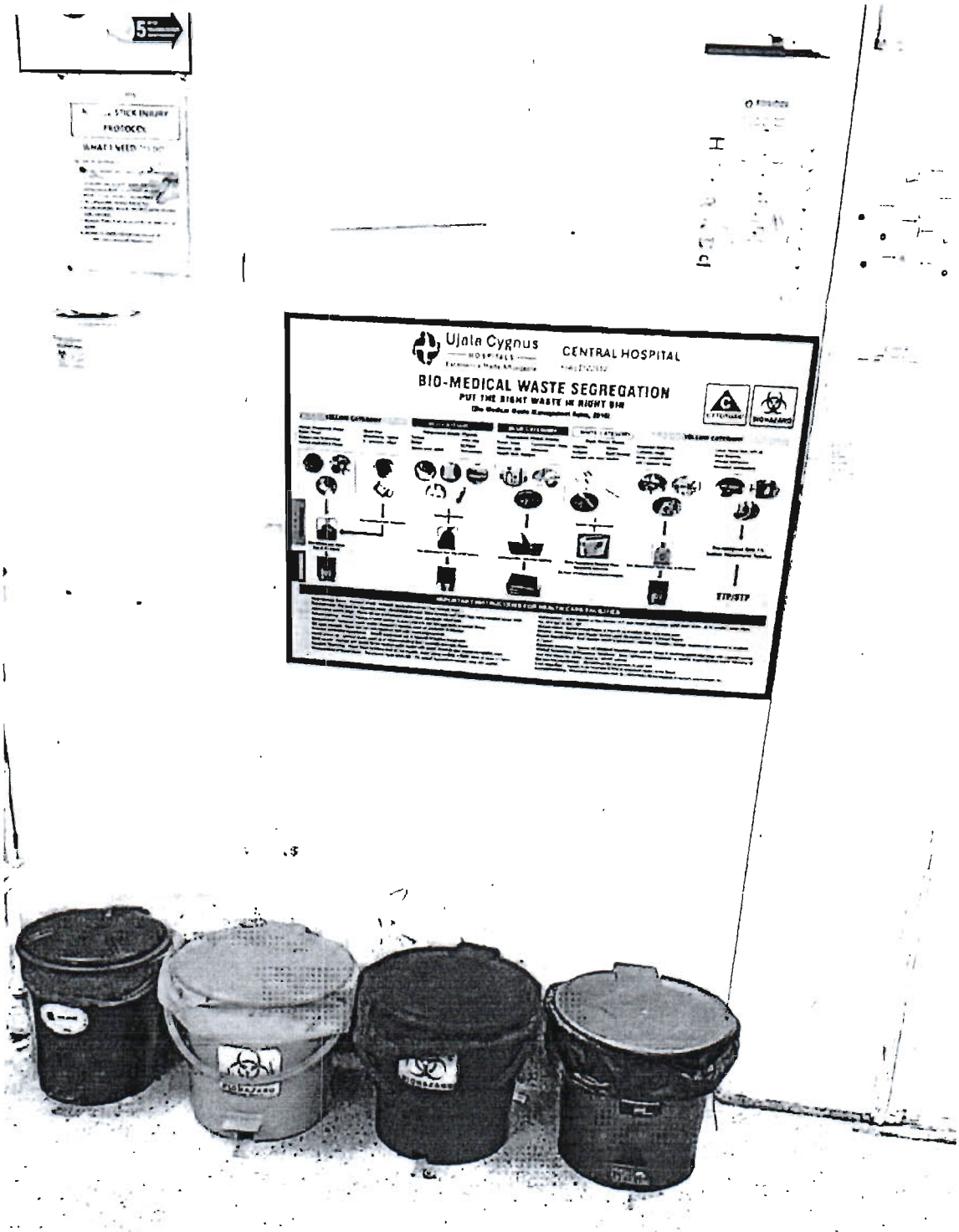
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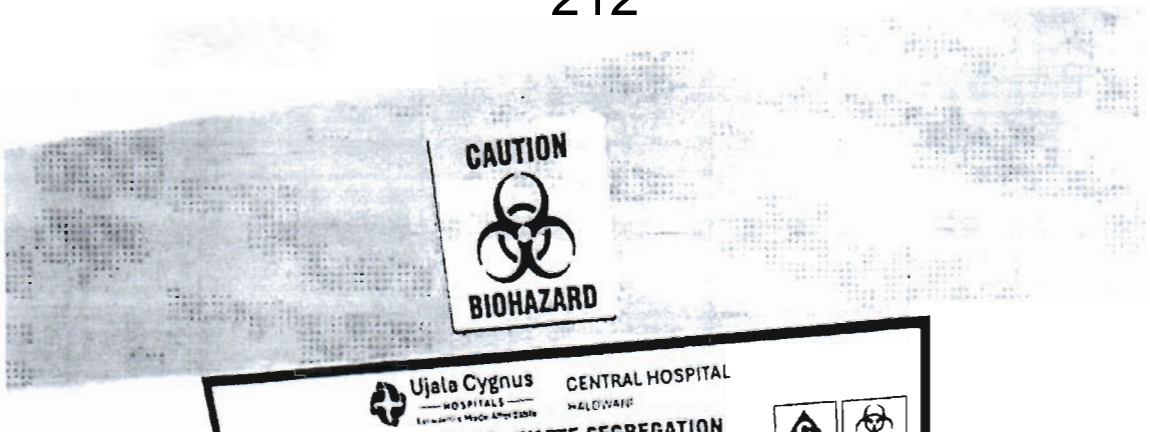
TC

63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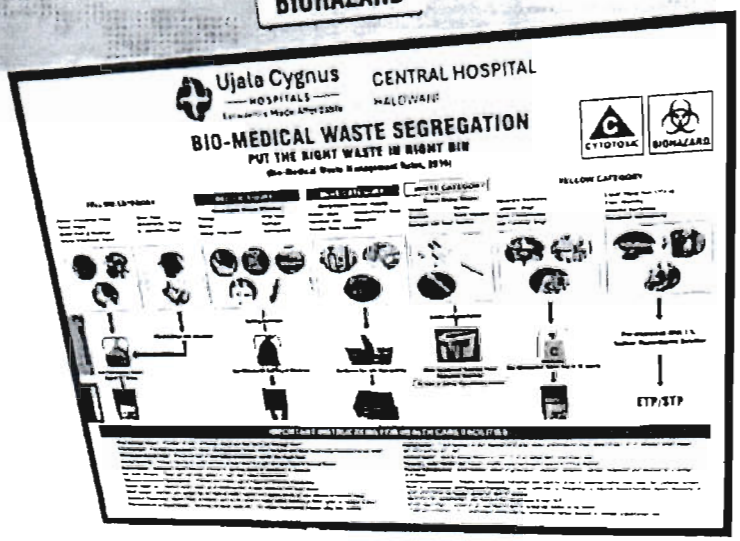
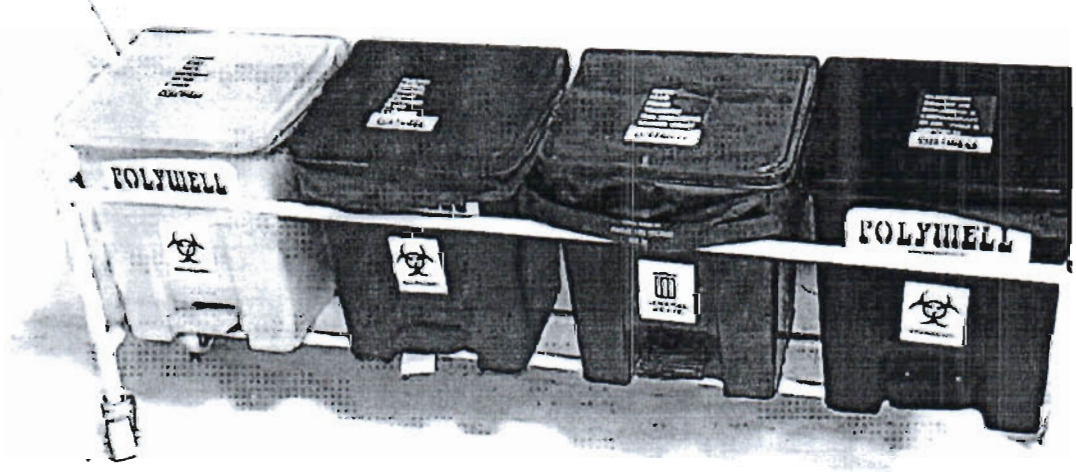
BIOHAZARD


Ujala Cygnus
HOSPITALS
CENTRAL HOSPITAL
BIO-MEDICAL WASTE SEGREGATION
PUT THE RIGHT WASTE IN RIGHT BIN
CYTOTOXIC
BIOHAZARD
ETP/STP


POLYWELL
POLYWELL

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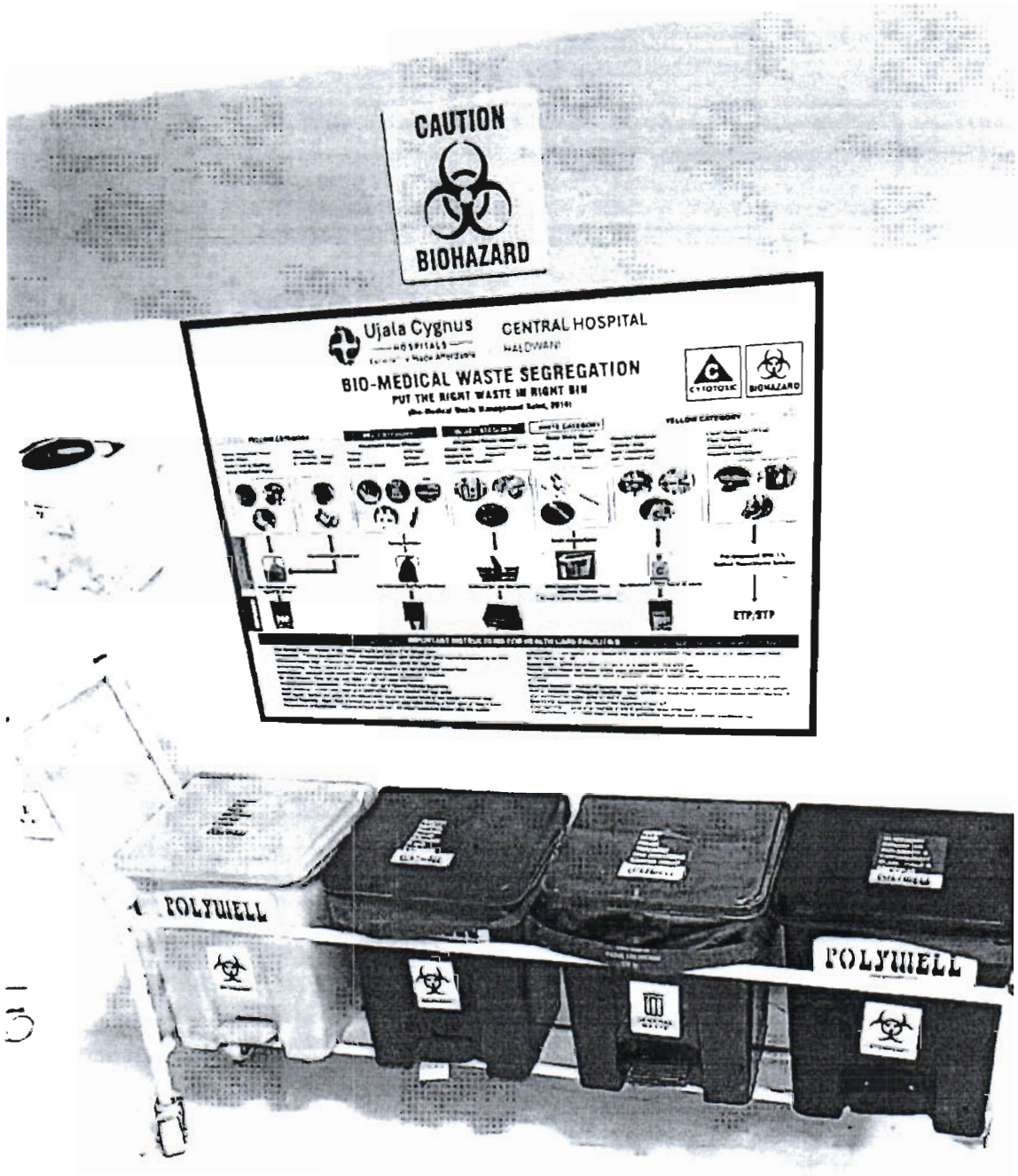
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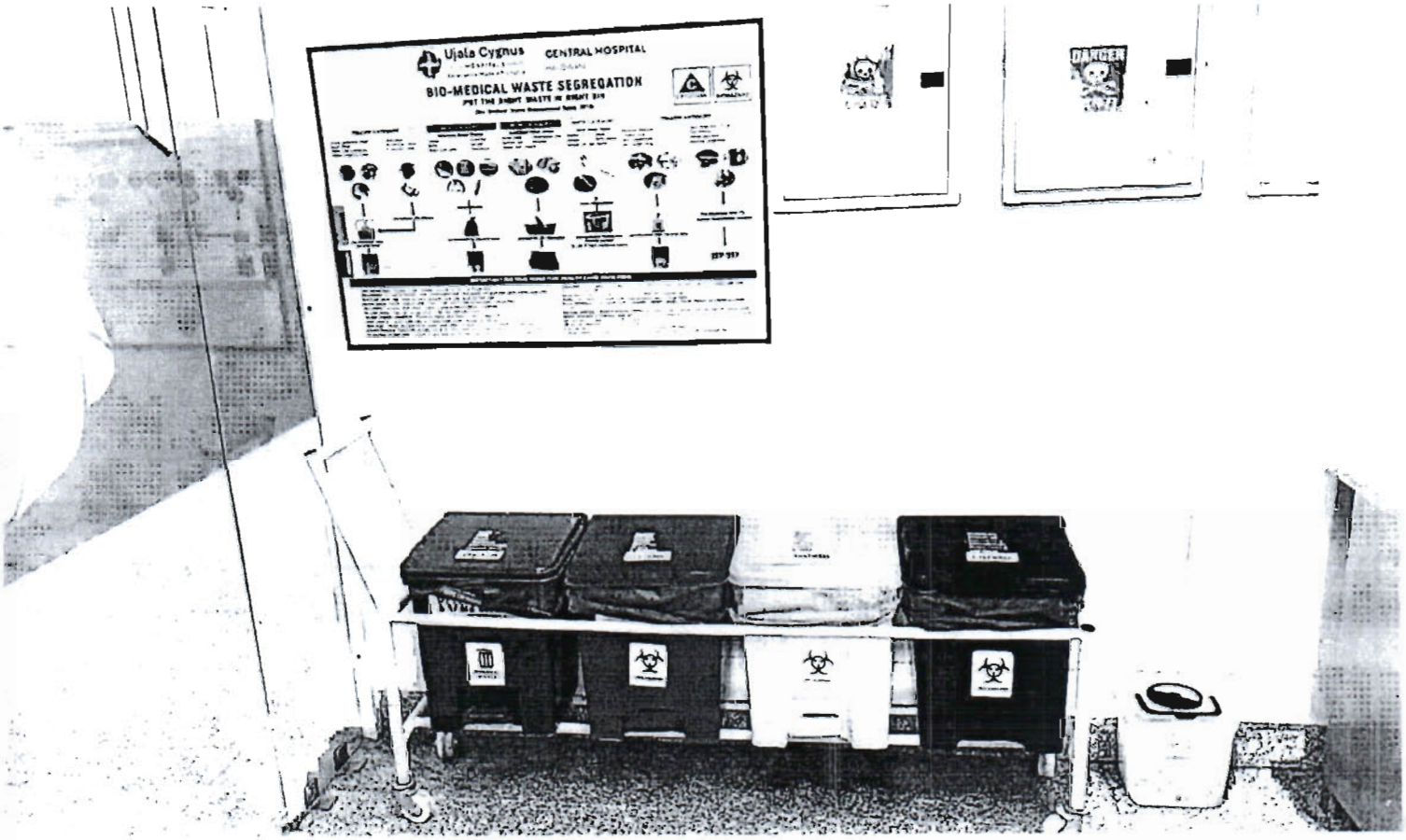
CYTOTOXIC
BIOHAZARD
ETP/STP
POLYWELL
POLYWELL

8
TC

65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CENTRAL HOSPITAL
BIO-MEDICAL WASTE SEGREGATION
DANGER

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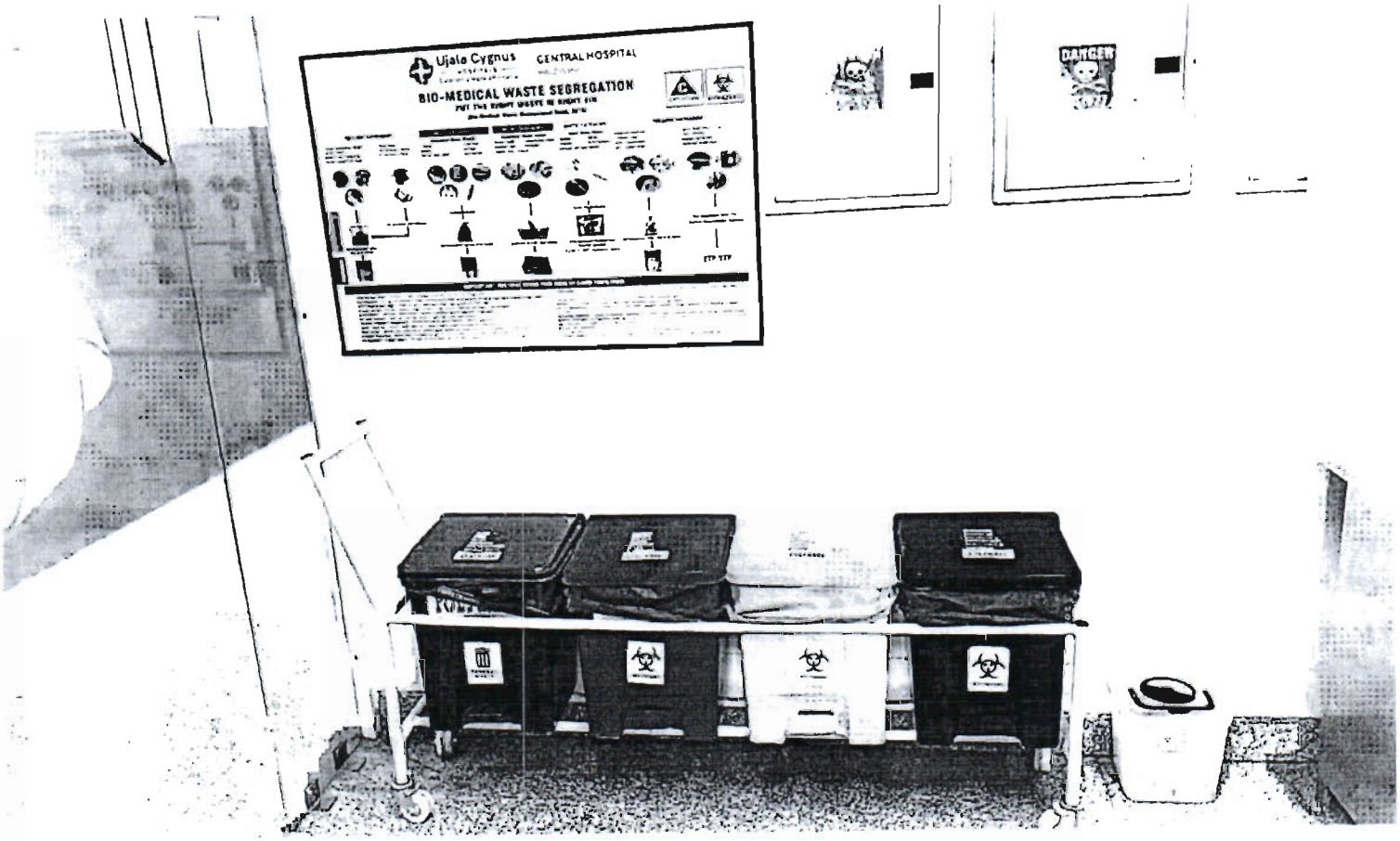
Ujala Cygnus CENTRAL HOSPITAL
BIO-MEDICAL WASTE SEGREGATION
DANGER

R
TC

67

Technical Report of 10 KLD
Effluent Treatment Plant

Submitted To:

M/s, Ujala Cygnus Central Hospital
Kaladhungi Road, near Gas Godam,
Tiraha, Kusumkhera,
Haldwani, Uttarakhand 263139

Prepared By

S M ENVIRONMENTAL EQUIPMENTS
C-430, Sector-19, Rohini,
New Delhi – 110 085.
Tel: +91 -9811061590, 011-41101442
Email: smenvo@gmail.com

TC

68

1. INTRODUCTION

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 is going to installed a Effluent Treatment Plant of capacity 10 KLD at their hospital for the treatment of effluent generates from various section of the hospital. Based on the observation and assessment a technical assessment report is prepared.

This report describes various aspects related to technical adequacy of the Effluent cum Effluent Treatment Plant of capacity 10 KLD. The technical assessment includes the quantification of wastewater, preparation of ETP layout and dimensioning of different components of S.T P

2. SOURCES OF WASTEWATER

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 has installed a Effluent Treatment Plant of capacity 10 KLD at to treat the sewage/wastewater generated from different sections of the Hospital before finally discharging it into the sewage or reuse.

The various sources from where wastewater is being generated is identified as: Operation Theater, Path. Lab, Kitchen, Toilets and bathrooms.

Total sewage generation from the premises is around 10 KLD Therefore, the present S.T.P has been designed for the treatment of total 10 KLD capacity The treated water is used in horticulture, flushing, cooling towers etc. and partially discharged into sewer line

The main parameters identified in the wastewater as pollutant load are BOD and suspended solids.

3. DESIGN BASIS OF EFFULENT TREATMENT PLANT

The characteristics of sewage considered for designing is given below in table:

S.NO.	Parameter	Unit	Raw effluent	Treated Water
1	Design Flow	M3/day	10	9
2	Average Flow	M3/hr	0.5	0.45

Characteristics of Sewage

S.NO.	Parameter	Unit	Raw effluent	Treated Effluent after Filtration	UF Water Treatment
1	PH		6-8	5.5-9	7-8
2	COD	mg/l	400-800	Less than 100	Less than 20
3	TSS	mg/l	150-350	Less than 50	Less than 10
4	OIL&GEASE	mg/l	20-30	Less than 10	Less than 1
5	BOD5	mg/l	250-350	Less than 30	Less than 5

TC

69

4. SELECTION OF TREATMENT TECHNOLOGY:

The Hospital has a Effluent Treatment Plant for the total effluent streams mentioned above. A detailed analysis of the control system has been made in order to determine the effectiveness of the control system. The treatment unit virtually works on a 24-hour basis although the Effluent discharges follow cycles with high peaks and low troughs depending on the time of the day due to the fact of being mostly originating from domestic activities.

The Effluent cum Effluent Treatment Plant has been designed and installed based on combined treatment Physio Chemical process involving primary settling, Reaction Coagulation Flocculation Settling, polishing & filtration. Chemically Treated effluent goes to STP for further Biological Treatment

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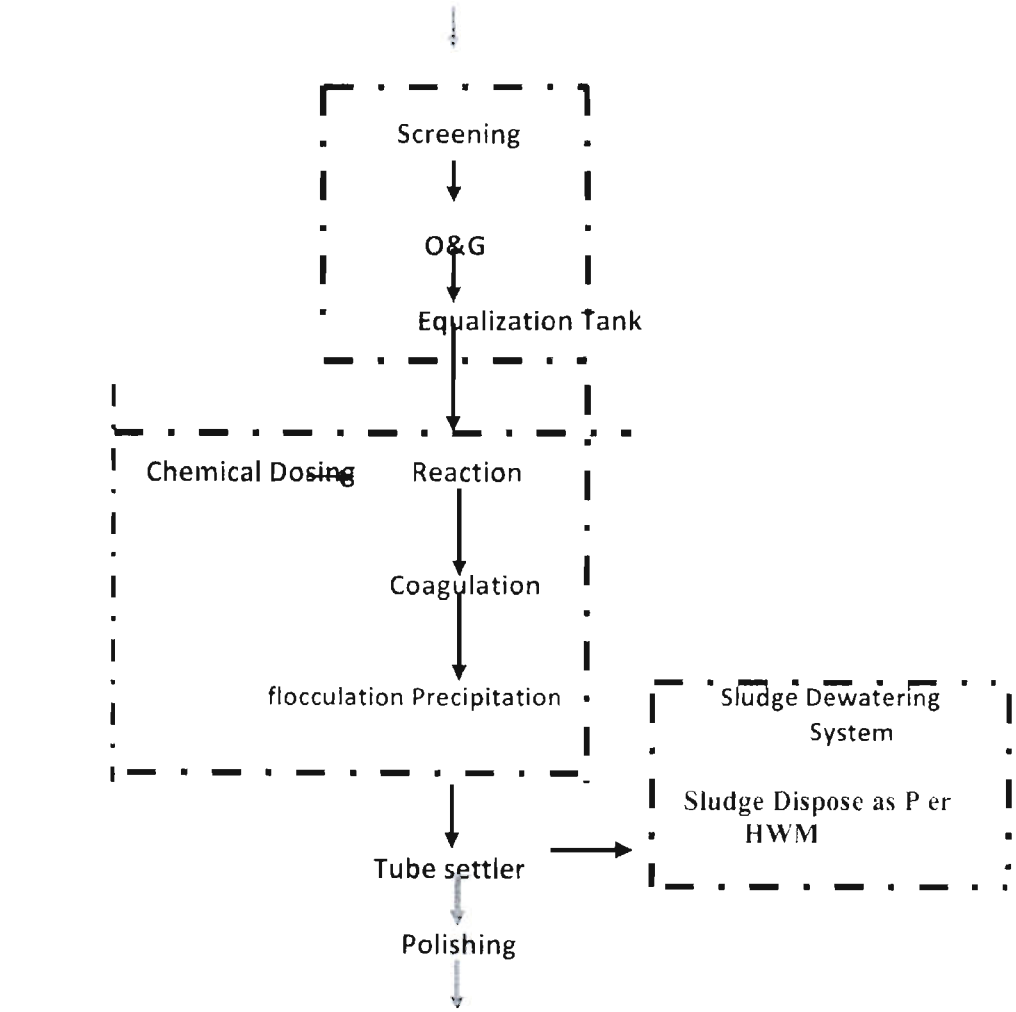
70

Schematic diagram for Physico Chemical Treatment Plant & Filtration unit



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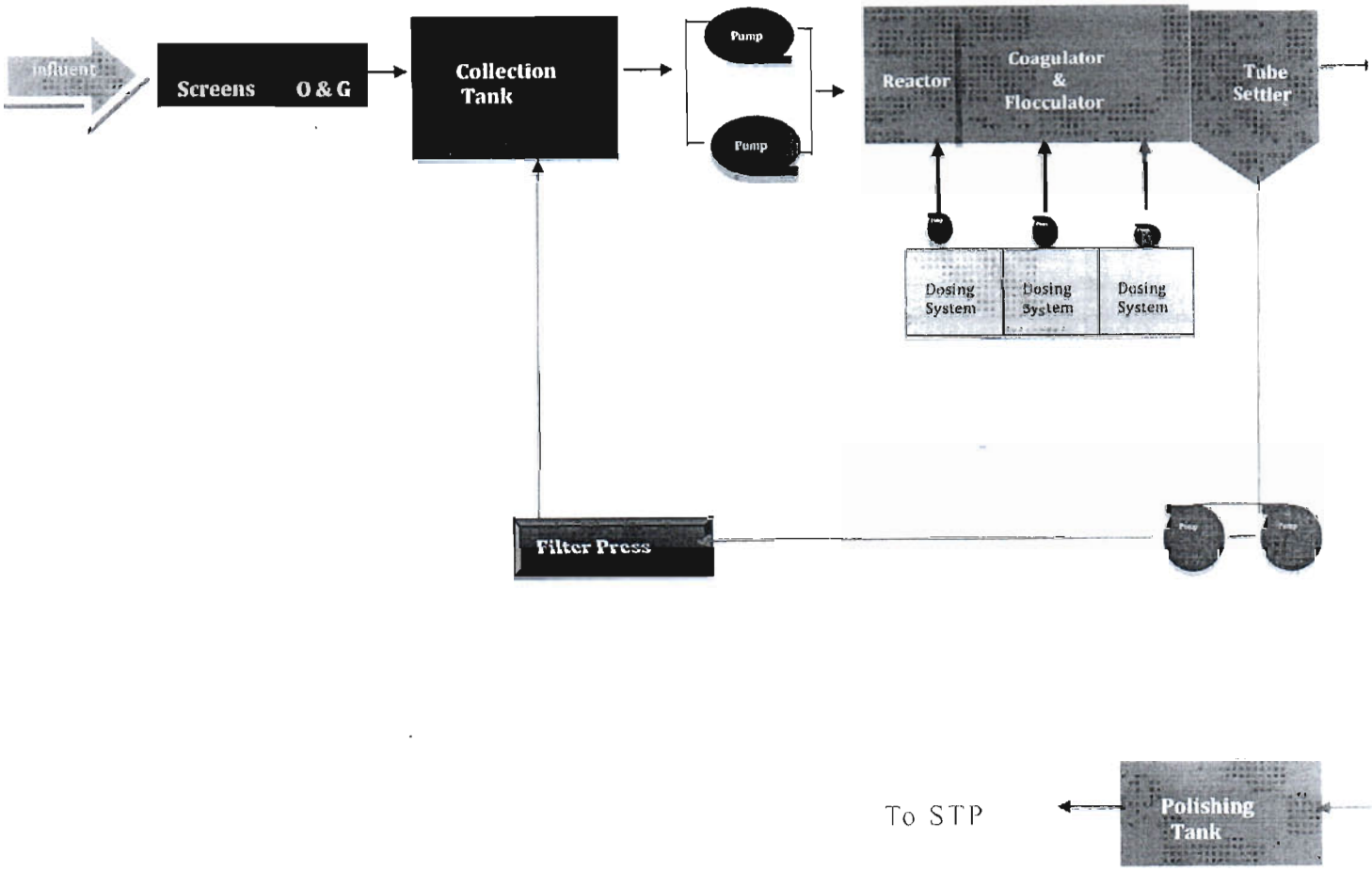
71

Influent Treatment Plant P & I Diagram (Capacity:10KLD)



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72

5. TREATMENT PLANT PROCESS UNITS

The Effluent treatment plant has been designed based on continuous flow operation for the treatment of the Yellow Effluent from (OT Waste, path lab,Cath lab ,Lab our Room, Dialysis etc) generated during different process of Hospital. The Effluent Treatment Plant consists of the following units:

I. Process Units
Screen Chamber
Oil & Grease Trap
Collection cum Equalization Tank
Reactor
Coagulation/Precipitation
Flocculation
Hopper Bottom Clarifier
Polishing

II. Mechanical Ancillary Units:
Raw Sewage Transfer Pump
Plant Room Drainage Pump
Air Blower
Sludge Recirculation Pumps
Filter Feed Pumps
Pressure Sand Filter
Activated Carbon Filter
Sludge Filter Unit

III. Electrical & Electronics Ancillary Units:

Electrical Control Panel

PH Meter,

Flow Meter

4. Effluent Treatment Plant Working Principle

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73

- **Bar Screen:** Raw Effluent from the source is received into the bar screen chamber by gravity. Screen provided will remove all floating and big size matter such as plastics, polythene bags, glasses, stones etc; which may otherwise choke the pipeline and pumps.

- **O& G Trap :** An Oil and Grease Trap also known as Grease Trap, **Grease Interceptor** is a device used to trap oil, grease, food solids etc from the wastewater before they enter into a sewer system. The Oil and Grease Trap prevents the clogging of sewer by preventing the Oil, grease fats and solids from entering the sewer.

- **Collection-cum-Equalization Tank**: Usually, generation is more during morning hours and evening hours. Visually no sewage is generated during night hours. Any biological system needs constant feed for bacteria to work efficiently. Hence, it is important to put an equalization tank to collect the excess flow during peak hours and feed sewage in lean hours. Provision of air grid is made for thoroughly mixing of sewage to make it of homogenous quality and to keep the suspended matter in suspension and to avoid septic condition.

- **Transfer of Effluent** : The sewage transfer pump of suitable discharge rate 1 is provided. The operation of the pump is controlled through level controller The influent is transferred to neutralization tank.

- **Neutralization:- neutralization** or **neutralization** is a chemical reaction in which acid and a base react with an equivalent quantity of each other In a reaction in water, neutralization results in there being no excess of hydrogen or hydroxide ions present in the solution. The pH of the neutralized solution depends on the acid strength of the reactants.

- Coagulation: -

Coagulation water treatment is the first step in chemical wastewater treatment
Instead of passing over particles that would otherwise slip through the filter and fall too slowly to be trapped as sediment, coagulation clumps them together so they are more easily removed.
In coagulation treatment, a harmless chemical such as alum causes all of the particles to give off a positive charge and thus clump together, making them easier to filter. Coagulation is especially useful in removing the chemical phosphorus from water. Yet coagulation water treatment is far from

TC

74

- Flocculation

  Flocculation goes hand in hand with coagulation in wastewater treatment. Once the waste particles have clumped together using coagulation, flocculating agents in wastewater treatment are used to remove the clumps. Flocculants are lightweight, medium weight and heavy polymers that cause The destabilized clumps of particles to agglomerate and drop out of the solution, removing them from the filtered water The weight used depends on the type of particle.

  Flocculants are like a high-tech rope that ties all of the coagulated clumps together. Flocculants come in various charges, charge densities, molecular weights and forms, and they have also been around for centuries. Natural polymers, such as crushed nuts, have been used as flocculants since prehistoric times by some central African tribes.

- **Tube settlers: -**
  which are also known as plate settlers or lamella clarifiers are used in drinking- and wastewater treatment plants to settle out suspended solids. Depending on the application the TSS (total suspended solids) loading can vary between 50 to 500mg/l or more. When the solid settling force is higher as all drag forces, solids will settle down on the channel surface of the tube settler, accumulate with other solids and slide down as sludge.

- **Sludge Removal** : The sludge from the bottom of the clarifier is transferred to techno bag in which fabric cloth filters are attached. The filtrate from here is again sent back to the collection tank for its further treatment. The semi dried sludge is then kept for solar drying. After solar drying sludge is collected and stored separately for its further disposal/use as per applicable guidelines.

- **Polishing Tank:** In polishing tank, Required Chemical will be use to adjust the PH value

- **MGF &ACF**: The treated water of Polishing Tank. Passes through Sand filter and ACF is used as per requirement

TC

75

6. SPECIFICATIONS OF EQUIPMENTS

A-Electro-Mechanical Equipment

S.no	Equipment	MOC	Specification	Make	Quantity
1	Bar Screen	SS-304	Perforated	SMEE	1 No
2	Raw Sewage Transfer Pump	CI	1 M^3/hr@2 . Kg operate on 2900 RPM Self Priming Non-Clog	Willo / Kirlosker /Equivalent	2(1w+1s)
3	Coagulation				
4	Flocculation				
5	Tube deck Media	PVC	Hexagonal shape height 750 mm	SDM/SMEE/Equiv	lot
6	Air Piping	GI /UPVC	B Class epoxy coated / schedule 25	Zindal / Astral	lot
7	Sludge Recirculation Pump	CI	1 M^3/hr@1.5kg operated on 2900 rpm Self Priming Non-Clog	Willo / Kirlosker	1(1w)
8	Plant Piping & Valve	UPVC/GI Zindal	Dia-25 mm, Schedule 40/ B Class with epoxy coating	Astral	lot
9	Chemical Dosing System	PVC tank	One No 1 to 6 & Two no 1 to 10 LPH	SMEE Pump Asia LMI/Pentair /I-Dose / Minimex	3
10	Electrical Panel (MCC)		Details attached	Ess Tee Power	1
11	Cable	Copper PVC	3 core 1.5 to 2mm thick Armored copper wire	Poly cab	lot
12	UV System		1M^3/hr	Alfa	1

TC

76

B. MS FRP/ Civil Structure.

S. No.	Tank	Quantity	Capacity	Size in Meter	MOC	Scope
1	Bar Screen, Oil and Grease Chamber	1				Existing
2	Collection Equalization tank. Existing Septic tank	1				Existing
3	Coagulation		1 M^3			SMEE
4	Flocculation		1 M^3			SMEE
5	Tube Setling		2 M^3			SMEE
6	Polishing Tanks	1	2 M^3			SMEE
7	Sludge Drying Bed	1			Bricks masonry	Existing
8	Piping from ETP Tank to STP	1			PVC	Existing
9	Platforms Foundation,	1	6X5 M^2		CC	Existing

7. OTHER ELECTRICAL COMPONENTS

These are used of standard company make of adequate capacity as per the requirement. As the E.T.P is designed for its 20 hrs. continuous operation, each electrical component is used with additional stand by unit to operate on alternate basis.

8. SLUDGE HANDLING

Sludge collected from the Filter Press should be sun dried and collected in the bags sealed and disposed of as per applicable Bio medical waste rule guidelines.

9. SUMMARY OF TREATMENT PROCESS UNITS AND THEIR TECHNICAL ADEQUACY

The treatment process units are described above are summarized and presented in table above. The table shows the status of the equipment and process units in terms of their adequacy for the treatment of the sewage.

TC

77

The table also indicates that the process units are technically adequate for the operation of the Effluent- Treatment Plant giving a consistent operational result.

10. CONCLUSION

It is obvious from the detail described above, the ETP seems adequate as well as efficient to treat 10 KLD sewage water (for 20 hours operation/ day) To meet the regulatory requirements of Central & State Pollution Control Board. The different sub-units of the E.T.P. are of adequate capacity to treat the 10 KL sewage effluent generated per day. The unit is advised to manage the sludge as per applicable rules. In addition, the unit is advised to maintain daily logbook for quantifying the actual daily discharge.

TC

(100 - KLD STP)

78

Technical Report of 100 KLD (MBBR Based) Sewage Treatment Plant

Submitted To:

M/s, Ujala Cygnus Central Hospital
Kaladhungi Road, near Gas Godam,
Tiraha, Kusumkhera,
Haldwani, Uttarakhand 263139

Prepared By

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1. INTRODUCTION

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 is going to installed a Sewage treatment Plant of capacity 100 KLD at their hospital for the treatment of effluent generates from various section of the hospital. Based on the observation and assessment a technical assessment report is prepared.

This report describes various aspects related to technical adequacy of the Effluent cum Sewage treatment Plant of capacity 100 KLD. The technical assessment includes the quantification of wastewater, preparation of STP layout and dimensioning of different components of S.T.P.

2. SOURCES OF WASTEWATER

UJALA CYGNUS CENTRAL HOSPITAL Kaladhungi Road, near Gas Godam, Tiraha, Kusumkhera, Haldwani, Uttarakhand 263139 has installed a Sewage treatment Plant of capacity 100 KLD at to treat the sewage/wastewater generated from different sections of the Hospital before finally discharging it into the sewage or reuse.

The various sources from where wastewater is being generated is identified as: Operation Theater, Path. Lab, Kitchen, Toilets and bathrooms.

Total sewage generation from the premises is around 100 KLD. Therefore, the present S.T.P has been designed for the treatment of total 100 KLD capacity. The treated water is used in horticulture, flushing, cooling towers etc. and partially discharged into sewer line

The main parameters identified in the wastewater as pollutant load are BOD and suspended solids.

3. DESIGN BASIS OF SEWAGE TREATMENT PLANT

The characteristics of sewage considered for designing is given below in table:

S.NO.	Parameter	Unit	Raw effluent	Treated Water
1	Design Flow	M3/day	100	90
2	Average Flow	M3/hr	5	4.5

Characteristics of Sewage

S.NO.	Parameter	Unit	Raw effluent	Treated Effluent after Filtration	UF Water Treatment
1	P^H		6-8	5.5-9	7-8
2	COD	mg/l	100-600	Less than 100	Less than 20
3	TSS	mg/l	150-250	Less than 50	Less than 10
4	OIL&GEASE	mg/l	20-30	Less than 10	Less than 1
5	BOD5	mg/l	150-250	Less than 30	Less than 5

TC

80

4. SELECTION OF TREATMENT TECHNOLOGY:

The Hospital has a Sewage Treatment Plant for the total effluent/sewage streams mentioned above. A detailed analysis of the control system has been made in order to determine the effectiveness of the control system. The treatment unit virtually works on a 24-hour basis although the sewage discharges follow cycles with high peaks and low troughs depending on the time of the day due to the fact of being mostly originating from domestic activities.

The Effluent cum Sewage Treatment Plant has been designed and installed based on combined treatment process involving primary, secondary and tertiary treatment. The secondary and tertiary treatment section has been designed based on biological treatment of organic matters operated on a continuous mode
Sewage treatment plant at above mentioned address is based on MBBR (Moving Bed) Bioreactor Technology, which offers promise of several advantages as follows.

1. Can be designed to any size to deal with larger flow and loads.
2. Fine bubble diffused aeration used generally reduces the energy requirements as compared to surface aerators.
3. Modular design allows easy installation.
4. The tank does not need to be drained for access to the diffusers or media.
5. MBBR system takes higher shock loads without reducing the plant performance because of large quantity of Biomass available in the reactor
6. MBBR supports low sludge generation, low Odor and low visual impact.
7. Solids Retention Time (SRT) of can vary based on influent flow without negative process impact.
8. Less susceptible to upsets due to flow variations.
9. Reliable and consistent nitrification both in summer and winter operations.
10. Low power consumption (nearly 40 – 50% less than conventional system).
11. Very low skilled operations, control and maintenance requirement.
12. Trouble free operations even under difficult conditions.
13. Low sludge production and hence reduced odor and foul.
14. Lower concentration of residual suspended solids in treated water.
15. Improved corrugated PVC fills media is designed to have significantly reduced BOD load.

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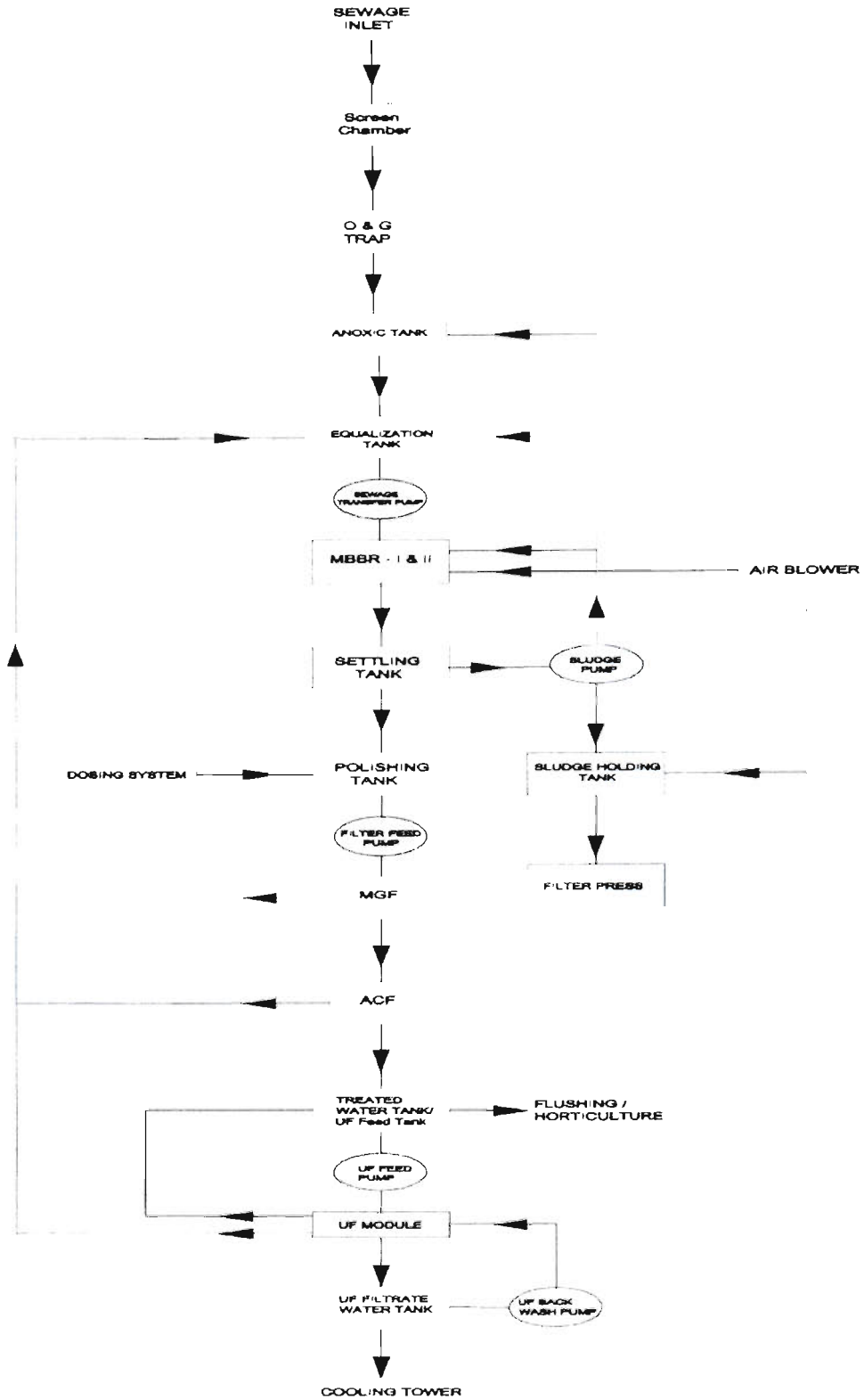
81

Treatment Scheme of Sewage Treatment Plant



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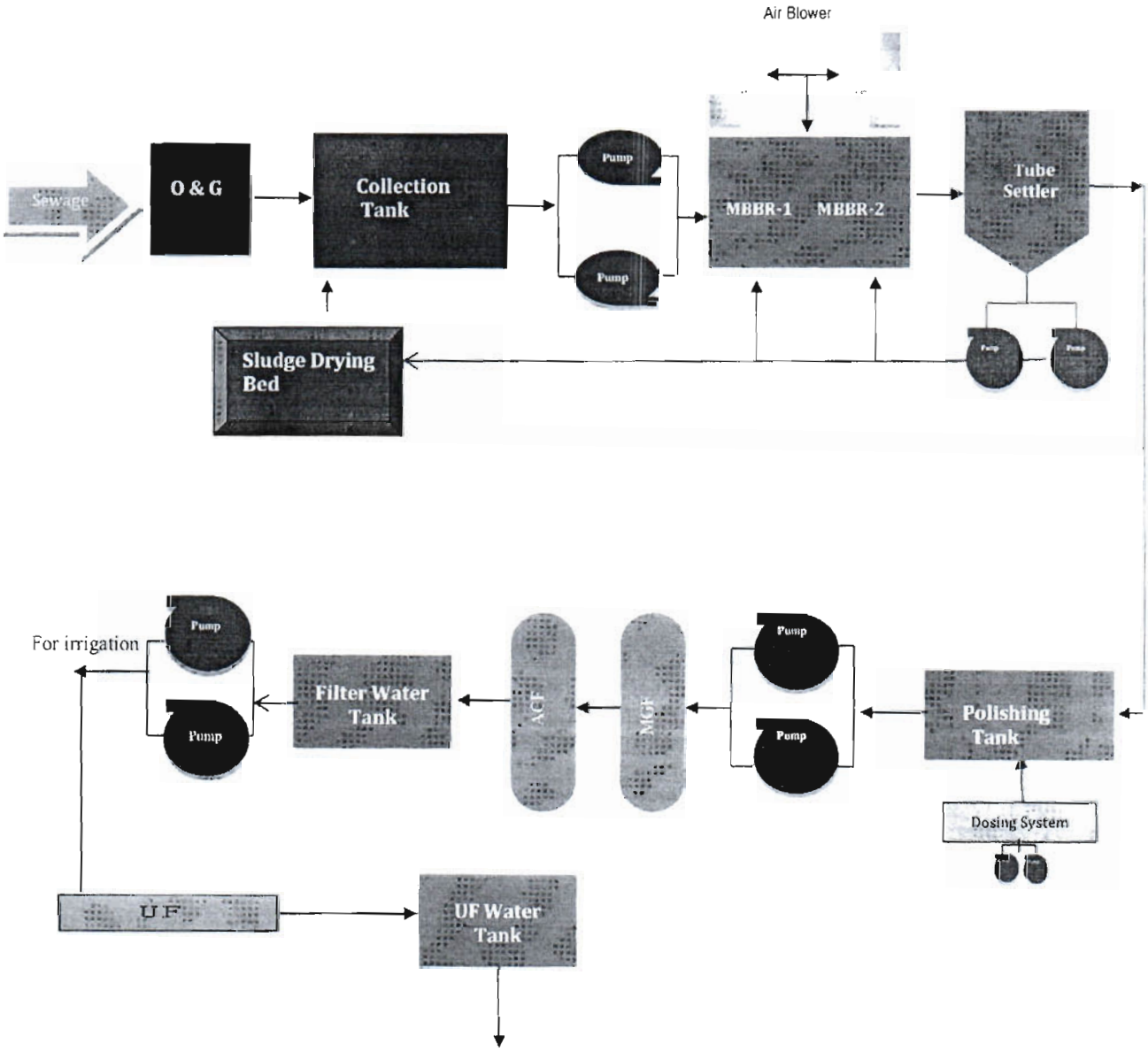
82

Sewage Treatment Plant Process Flow Scheme (Capacity:100KLD)



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83

5. TREATMENT PLANT PROCESS UNITS

The Sewage treatment plant has been designed based on continuous flow operation for the treatment of the sewage water The sewage treatment plant consists of the following units:

I. Process Units
Screen Chamber
Oil & Grease Trap
Collection cum Equalization Tank
MBBR Reactor
Hopper Bottom Clarifier
Chlorine Contact Tank
Pressure Sand Filter
Activated Carbon Filter
Sludge Filter Unit

II. Mechanical Ancillary Units:
Raw Sewage Transfer Pump
Plant Room Drainage Pump
Air Blower
Aeration Grid
Fine Bubble Diffusers system
Bio Deck Media
Sludge Recirculation Pumps
Filter Feed Pumps
Irrigation Pump
Ultrafiltration

III. Electrical & Electronics Ancillary Units:

Electrical Control Panel

PH Meter,

Flow Meter

4. TREATMENT SCHEME

- **Bar Screen:** Raw sewage from the source is received into the bar screen chamber by gravity. Screen provided will remove all floating and big size

TC

84

matter such as plastics, polythene bags, glasses, stones etc; which may otherwise choke the pipeline and pumps.

- **O& G Trap :** An Oil and Grease Trap also known as Grease Trap, **Grease Interceptor** is a device used to trap oil, grease, food solids etc from the wastewater before they enter into a sewer system. The Oil and Grease Trap prevents the clogging of sewer by preventing the Oil, grease fats and solids from entering the sewer.

- **Collection-cum-Equalization Tank**: Usually, sewage generation is more during morning hours and evening hours. Visually no sewage is generated during night hours. Any biological system needs constant feed for bacteria to work efficiently. Hence, it is important to put an equalization tank to collect the excess flow during peak hours and feed sewage in lean hours. Provision of air grid is made for thoroughly mixing of sewage to make it of homogenous quality and to keep the suspended matter in suspension and to avoid septic condition.

- **Transfer of Sewage:** The sewage transfer pump of discharge rate 1.5 KL/hr is provided. The operation of the pump is controlled through level controller. The sewage is transferred to MBBR tank.

- **Moving Bed Bio Reactor Tank:** The Bio Reactor is based on the Fluidized Random Aerobic Reactor which combines the advantage of an Activated Sludge Plant with the Random distribution systems such as Biofilters. With capacities that could be as low as 1/10th of ASP and fractional power consumption, such a reactor is ideal for the efficient removal of BOD and organics from the wastewater.

  The tanks are packed with RIGID PP-UV-sterilized Gas Fluted Media with liquid random distribution wherein air diffusers are placed to uniformly release air across the tanks.

Bacteria grow rapidly in the Bio-Pac unit under properly engineered conditions. They consume organic chemical for their growth and remove them from the wastewater. The bacteria convert chemical into biological cells, which under proper growth conditions, form slims. The slims adhere to available surfaces and accumulate into what we call random biological film or fixed film The high surface area-to-volume ratio of the units allows for accumulation of substantial

TC

85

concentration of bacteria in the relatively small reactor units. Further, the accumulated bacteria which provides high rates of removal or organic chemicals are fixed in the system and do not need to be recycled back to the basin.

In the Bio Reactor system, the water is constantly flowing through rigid PVC matrix to which the biological film attached. As the water flows past the biological film, bacteria in the film absorb organic chemicals as well as oxygen, nitrogen, phosphorus, and other trace nutrients required for their growth.

As the bacteria grow on the matrix and as more chemicals are added to the unit, the stationary biological film will continue to build in thickness. As the film becomes thicker the depth of penetration by diffusion of the absorbed material such as oxygen or other nutrients is not enough to reach the entire distance through the slime of the plastic media. At some point, the film will become sufficiently thick and portion of the film closest to the plastic media will not receive any food or nutrient, particularly oxygen. The inner layer of the film becomes anaerobic and the organisms lose their ability to adhere to the media surface. The shear forces of the water and / or air bubbles flowing through the matrix will ultimately become great enough to tear this portion of the biological film loose from the media. This process is called sloughing. The solids which slough from the media will flow out of the system with the effluents and are to be removed from the water through clarification in a settling module. The exposed portion of media surface will repeat the process of slime accumulation and sloughing.

In actual operation of the Bio Reactor units, biological film will be in a state of dynamic, continuous growth and sloughing. At any given time, portion of the media are always at some point between forming a new film sloughing. the biological film loose from the media. This process is called sloughing. The solids which slough from the media will flow out of the system with the effluents and are to be removed from the water through clarification in a settling module. The exposed portion of media surface will repeat the process of slime accumulation and sloughing. In actual operation of the Bio Reactor units, biological film will be in a state of dynamic, continuous growth and sloughing. At any given time, portion of the media are always at some point between forming a new film sloughing.

TC

86

❖ Working principal

The MBBR works on the same principle as the submerged fixed film process with only one exception - the media is not fixed and floats around in the aeration tank. The main advantage of this system over the submerged fixed film process is that it prevents choking of the media. This also avoids sludge recirculation. Compared to conventional technologies the MBBR is compact, energy efficient and user friendly. It also allows flexibility in design of the reactor tank.

- **Clarifier Tank:** This unit is provided to remove the settleable solids formed in MBBR tank. The unit is provided with a hopper bottom type clarifier in which the mixed liquor from the SAFF tank overflows. The sludge settles down and is continuously removed through sludge lifting pump. The clear water overflows into the chlorine contact tank.

- **Sludge Tank:** The sludge from the bottom of the clarifier is transferred to techno bag in which fabric cloth filters are attached. The filtrate from here is again sent back to the collection tank for its further treatment. The semi dried sludge is then kept for solar drying. After solar drying sludge is collected and stored separately for its further disposal/use as per applicable guidelines.

- **Polishing Tank:** In polishing tank, chlorination is done by dosing Sodium Hypochlorite solution 6-10% concentration for the dis-infection of biologically treated sewage. The dis-infected treated sewage is then lifted and fed to filtration unit. Filtration unit consists of pressure sand filter followed by activated carbon filter for removal of residual suspended particles.

- **MGF &ACF**: The treated water of Polishing Tank. Passes through Sand filter and ACF is used as per requirement

- **ULTRA FILTRATION**
  Ultrafiltration (UF) is a variety of membrane filtration in which forces such as pressure or concentration gradients lead to a separation through a semipermeable membrane. Suspended solids and solutes of high molecular weight are retained in the so-called retentate, while water and low molecular weight solutes pass through the membrane in the permeate (filtrate) This separation process is used in industry and

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research for purifying and concentrating macromolecular (10^3–10^6 Da) solutions, especially protein solutions.

6. SPECIFICATIONS OF EQUIPMENTS

A-Electro-Mechanical Equipment

S.no	Equipment	MOC	Specification	Make	Quantity
1	Bar Screen	SS-304	Perforated screens of 10 mm & 8 mm in suitable ss Frame with lifting arrangement	SMEE	1 SET
2	SITC Raw Sewage, Transfer Pump,	CI	5M^3/hr @1 Kg Flow Rate having CI casing & shaft, CI impeller complete with all accessories,	Willo/Kirlosker	2(1w+1s)
3	SITC Air Blower	CI	130M^3/hr @5mmwg operated on 1200 rpm	Rootech/ Akash /EVEREST driven by 1440 Rpm ABB Motors	2(1w+1s)
4	SITC Air Piping	GI /UPVC	B Class/ schedule 40	Zindal / Astral	lot
5	SITC Diffusers	EPDM	length 1000 mm Dia 63 mm grooved, wall thickness 2mm & Air flow 8-9 M^3	JAGER , Italy	lot
6	SITC MBBR Media	PVC	350M^2@M^3(minimum 60,000 pieces) with density	SDM /SASS /Equiv	13M^3
7	SITC Tube deck Media	PVC	Hexagonal shSMEE height 750 mm	SDM/SASS	5 M^3
8	SITC Sludge Recirculation Pump	CI	5 M^3/hr@1.kg Self Priming Non Clog	Willo/Kirlosker	2(1w+1s)
9	SITC Filter Feed Pump	CI	10 M^3/hr@2.5Kg Mono Block at 1400 Rpm	Willo/Kirlosker	2(1w+1s)
10	SITC Activated Carbon Filter	FRP	5 M3/hr@ 12m3per M^2 FRP Model	Pentair/TATA/Equivalent	1

TC

88

11	Multi grade Sand Filter	FRP	5 M3/hr@ 12m3per M^2	Pentair/TATA/Equivalen t	1
14	Plant Piping & Fittings	UPV C/GI	Schedule 40	Astral	lot
16	Chlorine Dosing System	PP	0-6 LPH	SMEE with E Dose Pump	1
17	Electrical Panel		Details attached	Ess Tee Power	1
18	Cable and Cable Tray	Copp er PVC	3 core 2mm thick Armored copper wire	Poly cab	lot
19	Filter Press		18x18x18	SMEE/HIGHTEK	
20	Screw Pump	CI-SS	$1M^3$/Hr @ 30 meter driven By 1 hp motors	Roto /Equivalent's	1
21	Electromagnetic Flow Meter	MS	1-10 M3/Hr	E&E/ Ester/Energiser	1
22	Outlet Digital Flow Meter	PVC	1-10 M3/Hr	E&E/ Ester/Energiser	1
23	PH meter		0-14 PH		
24	Pressure Gause, Floty Valve To Make System Automatic				
25	Erecting & Commissioning				
26	Transportation				

B Ultra Filtration System

S.No	Equipment	Specifications	Make	MOC	Quantity
1	Strainer	100 Micron	SMEE	PVC	1
2	UF Feed Pump	6 m3/hr@30m head	Wilo	SS 304	2
3	Bag Filter	100 Micron	SMEE	uPVC	1
4	UF Module	77 m2	DuPont Equivalent	PVDF	2
5	Dosing Pump	0-6 LPH @ 35m Head	E Dose	PP	3
6	Dosing Tank	CV Chemical Tank 100 L	Sintex	HDPE	3

TC

89

7	UF Backwash Pump	20 m3/hr@ 25m Head	Wilo	SS 304	2
8	Backwash MCF	05 Micron	SMEE	uPVC	1
9	CIP Pump	10 m3/hr@ 25m Head	Wilo	SS	1
10	CIP MCF	05 Micron	SMEE	UPVC	1
11	Interconnecting Pipeline	25mm NB	Astral	UPVC	1
12	Air Blower	20 m3/hr @ 06 m Head	Everest /Aksh	CI	1
13	UF CIP Tank	500L	Sintex	PVC	1
14	UF Skid	MSEP	SMEE	MSEP	1
15	UF Control Panel	Select	SMEE		1
16	UF Electrical cabling	mm cable	Poly Cabe	Copper	1
17	Rota meter	0-6 m3/hr	Aster		3
18	Pressure Guage	0-5 KG/cm2	Aster		3
19	Solenoid Valves		UFlow		6
20	Differential Pressure Switch	0-4 Kg/cm2	Danfoss, Equivalent		1

C. Skid Mounted MS FRP Tank

S.No.	Tank	Quantity	Capacity	MOC & Specification
1	MBBR Reaction Tank	2	2x 17 M3=34 M^3	6 mm thick MS sheet mounted on base channel of 125 x 65 , with 3 No. stiffener size 100 x 50 middle and top(Coated with 2 mm FRP inner coat & epoxy outer side and
2	Tube Settler	1	10 M3	"
3	Polishing /Chlorination Tank	1	8 M3	"
4	Filter water tank/UF Feed Tank	1	10 M3	"
5	U F water storage tank	1	10 M3	"
6	Ladder with handrail walkway Plat Form	Lot		

D. Existing MSFRP/ Civil Work

S. No.	Tank	Quantity	Capacity	Size in Meter	MOC
1	Bar Screen, Oil & G Chamber	1	$2M^3$		Existing
2	Collection, Equalization tank	1	$20M^3$		Existing

TC

90

	Sumps				
3	Sludge Holding Tank	1	$5M^3$		Existing
4	CC Plat form	1			CC Existing

7. OTHER ELECTRICAL COMPONENTS

These are used of standard company make of adequate capacity as per the requirement. As the S.T.P is designed for its 20 hrs. continuous operation, each electrical component is used with additional stand by unit to operate on alternate basis.

8. SLUDGE HANDLING

Sludge collected from the Filter Press should be sun dried and collected in the bags sealed and disposed of as per applicable guidelines.

9. SUMMARY OF TREATMENT PROCESS UNITS AND THEIR TECHNICAL ADEQUACY

The treatment process units are described above are summarized and presented in table above. The table shows the status of the equipment and process units in terms of their adequacy for the treatment of the sewage. The table also indicates that the process units are technically adequate for the operation of the Effluent-Sewage treatment plant giving a consistent operational result.

10. CONCLUSION

It is obvious from the detail described above, the STP seems adequate as well as efficient to treat 100 KLD sewage water (for 20 hours operation/ day)

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91

To meet the regulatory requirements of Central & State Pollution Control Board. The different sub-units of the S.T.P. are of adequate capacity to treat the 100 KL sewage effluent generated per day. The unit is advised to manage the sludge as per applicable rules. In addition, the unit is advised to maintain daily logbook for quantifying the actual daily discharge.

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NOIDA TESTING LABORATORIES LLP

(A Government of India Approved Testing Laboratory)

(An ISO : 9001 : 2015, ISO 45001 : 2018 (OH&S) Certified & NABL Accredited Laboratory)

MoEF, CC (Ministry of Environment, Forest & Climate Change) and UPPCB Recognized Laboratory

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TEST CERTIFICATE

92

Issued To: M/s Ujala Cygnus Central Hospital	Report Code : WW-110226-016
Address: Kaladhungi Road, Near Gas Godam, Tiraha, Kusumkhera, Haldwani Uttarakhand 263139	Test Report of : Waste Water
	Discipline : Pollution & Environment
	Service Request No : NTL/SRF/02/26-05
	Service Request Date : 09/02/2026
	Report Issue Date : 16/02/2026

SAMPLING & ANALYSIS DATA

Sample Drawn On	:	10/02/2026
Sample Received On		10/02/2026
Sample Drawn By	:	NTL Representative
Sample Description	:	STP Outlet
Sample Quantity/Packing detail	:	1 lt. Plastic Cane/Glass Bottle
Weather Conditions	:	Normal
Analysis Duration	:	11/02/2026 to 16/02/2026
Sampling Procedure	:	NTL/LAB/W-WATER/SOP-002

TEST RESULTS

S. No.	Parameter	Test Method	Results	Units	Limits as per CPCB norms
1.	pH @ 25°C	IS:3025(Part-11)	7.52	-	5.5-9.0
2.	Total Suspended Solids at 105°C	IS:3025(Part-17)	16.0	mg/l	100.0
3.	Chemical Oxygen Demand (as O_2)	IS:3025(Part-58)	85.0	mg/l	250.0
4.	Biological Oxygen Demand (for 3 days at 27±1°C)	IS:3025(Part-44)	18.0	mg/l	30.0
5.	Oil & grease	IS:3025(Part-39)	BDL (<4.0)	mg/l	10.0

Remarks: Test parameters coming in under limit, prescribe limits are given by MoEF/Central Pollution Control Board

*Remarks: BDL- Below Detection Limit

Notes:

1. The results given above are related to the stated sample, as received & mentioned parameters. The customer asked for the above tests only.
2. Responsibility of the Laboratory is limited to the invoiced amount only.
3. This test report will not be generated again, either wholly or in part, without prior written permission of the laboratory.
4. The test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.

CHECKED BY

AUTHORIZED SIGNATORY

NOIDA TESTING LABORATORIES LLP NTL

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HEALTHCARE SERVICES

93

jalacygnus.com

सेवा में,
क्षेत्रीय अधिकारी महोदय
उत्तराखंड प्रदूषण नियंत्रण बोर्ड (UKPCB)
हल्द्वानी

दिनांक: 14 जनवरी 2026

विषय: STP/ETP री-मैपिंग रिपोर्ट प्रस्तुत करने एवं वैधानिक पर्यावरणीय अनुपालन के संबंध में

महोदय,

सादर अवगत कराना है कि हमारे संस्थान में स्थापित सीवेज ट्रीटमेंट प्लांट (STP) एवं एफ्लुएंट ट्रीटमेंट प्लांट (ETP) की री-मैपिंग रिपोर्ट, पर्यावरण संरक्षण अधिनियम, 1986, जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1974 तथा UKPCB द्वारा निर्धारित मानकों एवं दिशा-निर्देशों के अनुरूप तैयार कर प्रस्तुत की जा रही है।

उक्त री-मैपिंग से संबंधित समस्त कार्यवाही लगभग 4–5 माह की अवधि में पूर्ण की जाएगी। कार्य पूर्णोपरांत उत्पन्न समस्त अपशिष्ट जल का उपचार निर्धारित डिस्चार्ज मानकों के अनुरूप किया जाएगा एवं ट्रीटेड जल का अधिकतम पुनः उपयोग (Reuse) सुनिश्चित किया जाएगा।

किसी अपरिहार्य स्थिति में यदि ट्रीटेड जल का टैंकर द्वारा निष्कासन किया जाता है, तो यह पूर्णतः उपचारित, नियमानुसार परीक्षणित एवं कृषि उपयोग योग्य मानकों के अनुरूप होगा, जिससे किसी भी प्रकार का पर्यावरणीय प्रदूषण न हो।

अतः आपसे अनुरोध है कि प्रस्तुत रिपोर्ट को अभिलेख में लेते हुए आवश्यक दिशा-निर्देश प्रदान करने की कृपा करें।

भवदीय,

डॉ. नवनीत
असिस्टेंट मेडिकल सुपरिटेंडें

उजाला सिग्नस सेंट्रल हॉस्पिटल

16/01/26

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NCT OF DELHI COURT FEE
DLCT1725514L2535K
17-DEC-2025

243

94

IN THE COURT OF National Green Tribunal Principal Bench, New Delhi
Suit/Appeal/Complaint/CWP OA No- 75/2026 JURISDICTION.
In re:

Deep Chandra Pande Plff./Applt./Petitioner/Complainant

VERSUS

Uttrakhand Pollution Control Board & Ors. Defnt./Respondent/Accused

KNOW ALL to whom these present shall come that I/We Respondent No- 4
Ms. Ujala Cygnus Central Hospital Haldwani the above named do
hereby appoint. Adv Mansi Bajaj)
N-14B, FF, Jangpura Extn, Delhi-110014, Mob No-9818000003
mansi.bajaj@mblegalassociates.com
Adv Mansi Bajaj S.K. Roy (Advocates)
54, Vinobapuri, Lajpat Nagar-II, New Delhi-110024. Ph. No- 9999357436, Mail id:-,
sanjayroy.adv@gmail.com & aiclindia@gmail.com

(herein after called the advocate/s) to be my/our Advocate in the above-noted case authorized him:- To act, appear and plead in the above-noted case in this Court or in any other Court in which the same may be tried or heard and also in the appellate court including High Court subject to payment of fees separately for each court by me/ us.

To sign, file verify and present pleadings, appeals cross-objections or petitions for execute on review, revision, withdrawal, compromise or other petitions or affidavits of other documents as may be deemed necessary or proper for the prosecution of the said case in all its stages.

To file and take back documents to admit and/or deny the documents of opposite party.

To withdraw or compromise the said case or submit to arbitration any differences or disputes that may in any manner relating to the said case.

To take execution proceedings.

The deposit, draw and receive money, cheques, cash and grant receipts thereof and to do all other acts may be necessary to be done or the progress and in the course of the prosecution of the said case.

To appoint and instruct any other legal practitioner, authorizing him to exercise the power and authority hereby conferred upon the Advocate whenever he may think fit to do so and to sign the Power of Attorney on our behalf.

And I/we the undersigned to hereby agree to ratify and confirm all acts done by the advocate or his substitute in the matter as my/our own acts, as if done by me/us to all intents and purposes.

And I/we undertake that I/we or my/our duly authorized agent would appear in the Court on all hearings and will inform the Advocate for appearance when the case is called.

And I/we undersigned to hereby agree not to hold the advocate or his substitute responsible for the result of the said case. The adjournment costs whenever ordered by the Court shall be of the Advocate, which he shall receive and retain himself.

And I/we the undersigned do hereby agree that in the event of the whole or part of the fee agreed by me / us to be paid to the advocates remaining unpaid he shall be entitled to withdraw from the prosecution of the said case until the same is paid up. The fee settled is only for the above case and above Court. I/we hereby agree that once the fee is paid. I/we will not be entitled to the refund of the same in any case whatsoever.

IN WITNESS WHEREOF/I/we do hereunto set my/our hand to these presents the contents of which have been understood by me/us on this _____ day of _____ 2026.

Mansi Bajaj
Advocate D/485/08.

Abhishek.
Client D/920/23

UJALA CYGNUS CENTRAL HOSPITAL HALDWANI 263139

UJALA CYGNUS CENTRAL HOSPITAL Abhishek Client

Gmail

Mansi Bajaj <mansi.bajaj@mblegalassociates.com>

OA 75 of 2026 DEEP CHANDRA PANDE V. UTTARAKHAND POLLUTION CENTRAL BOARD & ORS

1 message

Mansi Bajaj <mansi.bajaj@mblegalassociates.com> Wed, Apr 15, 2026 at 1:49 PM
To: haldwaninagarnigam@gmail.com, dm-nai-ua@nic.in, msukpcb@yahoo.com

Sir,
I am the concerned counsel for Respondent No.4 in the captioned matter, PFA the reply on behalf of Respondent No.4 in the captioned matter. Kindly treat htis mail as advance service.

Regards,
Counsel for Respondent No.4

Mansi Bajaj,Adv.
LL.B., LL.M., PGDM, PGDMLE, PGDIPR, Mediator
MB Associates
N-14B, FF, Jangpura Extension,
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Deep Chandra Pande Vs Uttrakhand Pollution Central Board And Ors Counter Affidavit On Behalf Of Respondent no 4.pdf
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