

DIT University Event Report 2022-23

SDG-6



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Water is essential requirement of life. If water is pure it can sustain lifeforms on the other aspect, polluted water is the cause of disaster. UN SDG 6 promotes 'Clean Water and Sanitation' ensuring access to water and sanitation for all. All stakeholders of society are having the fundamental rights to access this resource in easily accessible and clean form. Also the society must ensure the water as resource must not be polluted by human activities. Wastage must be eradicated. At present, it is becoming very difficult to obtain sufficient quantity and good quality water. All this is due to unscientific usage. Also the resource is continuously diminishing at various sources and going out of access to certain sections of society. So it is our duty to ensure the sustainability of water through pollution mitigation, judicious usage and environmental awareness. DIT University promotes this objective through its policy of sustainable water usage, reuse of waste water, conservation principle and promoting same through research and outreach activities.

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Sewage Treatment Plant (STP) Specifications

Sewage Treatment Plant

Treatment capacity - 500kld

Manufacturer - Ion Exchange India Ltd

Year of commissioning - April 2019

Technology - MBBR

Average treatment – 500 cubic metre per day

Operation & Maintenance with - Mentor Water Experts

Record - Daily Log Book

Intake water quantity & processed water quantity record, chemicals record used in process

Daily testing parameters testing's –pH (6.5 to 8.5), TDS (less than 2000ppm, mlls - 10to 35%, chlorine level 5 to 10ppm, color-colorless & odor –odorless

Treated water testing - quarterly

NABL Accredited analytical parameters

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DIT University- Sewage Treatment Plant Unit



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Sample Log Record of STP

Mentor Water Experts Pvt. Ltd. Sewage Treatment Plant 500 KLD Logbook													Date:- 12-6-2023	
Site:- DIT University													Day:- Monday	
Sr.	Check Point	Status	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	2.00	4.00
Primary Treatment														
1	Bar Screen	Clean	clean	clean	clean	clean	clean	clean	clean	clean	clean	clean	clean	clean
2	OGT	Clean	clean	clean	clean	clean	clean	clean	clean	clean	clean	clean	clean	clean
3	EQT Level	in %	30%	30%	40%	40%	50%	50%	60%	50%	50%	60%	50%	50%
STP 265 KLD														
1	Inlet Flow	m3/Hr	off	off	off	off	off	off	off	off	off	off	off	off
2	Anoxic chamber	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
3	Agitator	Run/ Stop	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
4	FMR	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
5	Lamella	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
6	Sludge recirculation	On/Off	off	ON	off	ON	off	off	off	off	off	off	off	off
7	Sludge Drained	Min	-	-	-	-	-	-	-	-	-	-	-	-
8	Chlorine Dosing	On/Off	off	off	off	off	off	off	off	off	off	off	off	off
9	Blower Pressure	kg/cm2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
10	Filter Diff. pressure	< 1.5 kg/cm2	off	off	off	off	off	off	off	off	off	off	off	off
FMR 300														
1	Inlet Flow	m3/Hr	6.5	off	6.5	6.5	6.6	6.7	6.6	6.5	6.1	6.2	5.7	5.6
2	Anoxic chamber	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
3	Agitator	Run/ Stop	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
4	FMR	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
5	Lamella	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
6	Sludge recirculation	On/Off	off	ON	off	off	off	off	off	off	off	off	off	off
7	Sludge Drained	Min	-	-	-	-	-	-	-	-	-	-	-	-
8	Chlorine Dosing	On/Off	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
9	Blower Pressure	kg/cm2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
FMR 200														
1	Inlet Flow	m3/Hr	off	off	off	off	off	off	off	off	off	off	off	off
2	Anoxic chamber	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
3	Agitator	Run/ Stop	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN	RUN
4	FMR	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
5	Lamella	Ok/Nok	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
6	Sludge recirculation	On/Off	off	ON	off	off	ON	off	off	off	ON	ON	ON	ON
7	Sludge Drained	Min	-	-	-	-	-	-	-	-	-	-	-	-
8	Chlorine Dosing	On/Off	off	off	off	off	off	off	off	off	off	off	off	off
9	Blower Pressure	kg/cm2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Tertiary Treatment														
1	BWT Level	in %	50%	50%	40%	50%	50%	70%	50%	60%	60%	70%	60%	50%
2	Filter Diff. pressure	< 1.5 kg/cm2	off	1.5	off	off	1.5	1.5	off	off	off	off	1.5	off
3	Outlet flow	m3/Hr	off	20.5	off	off	25.1	25.1	off	off	off	off	25	off
4	Backwash Pressure	kg/cm2	off	1.5	off	off	1.5	1.5	off	off	off	off	off	off
5	UV System	On/Off	off	ON	off	off	ON	ON	off	off	off	ON	ON	off
6	TWT Level	in %	70%	80%	80%	60%	70%	60%	50%	60%	70%	70%	80%	90%
7	TWP Pressure	kg/cm2	off	off	off	off	off	off	off	off	off	off	off	off
8	Filter Press	Run/ Stop	stop	stop	stop	stop	stop	stop	stop	stop	stop	stop	stop	stop
9	SHT Level	in %	50%	50%	50%	40%	30%	30%	10%	10%	10%	10%	10%	10%
UF Treatment														
1	UF Feed Tank Level		70%	80%	80%	60%	70%	60%	60%	70%	80%	70%	80%	90%
2	Inlet Pressure	< 2.0 kg/cm2	off	off	off	off	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
3	Permit Pressure	< 1.0 kg/cm2	off	off	off	off	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
4	Permit Flow	> 2 m3/hr	off	off	off	off	2.5	2.5	2.5	2.5	2.4	2.3	2.4	2.4
5	Reject Pressure	< 1.0 m3/hr	off	off	off	off	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5
6	Reject Flow	< 1.5 kg/cm2	off	off	off	off	0.5	0.5	0.5	0.5	1.1	1.2	1.1	0.5
7	Backwash Pressure	< 3.0 m3/hr	off	off	off	off	1.5	1.5	1.5	1.5	2.3	2.4	2.5	0.5
8	Chemical Tank Level	> 25%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
9	UF Water Tank Level		80%	80%	80%	90%	80%	80%	80%	80%	90%	70%	60%	70%
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May 16, 2022

Water Conservation Policy (Revised) of DIT UNIVERSITY

PREAMBLE

The water policy of DIT University aims to follow the collection, distribution, utilization, re usage and conservation of water in a sustainable way in line with objective of the University to establish a sustainable Campus in line with the famous saying of "Every Drop Counts". The policy ensures most effective ways to ensure avoidance and no wastage and optimum utilization of water with appropriate infrastructure planning and execution at ground level with cooperation of all the stakeholders of University.

OBJECTIVE

DIT University has strong water policy that ensures pollution free clean water for all stakeholders of University and use of same in most sensible and sustainable ways with the inclusion of water conservation principles.

1. WATER COLLECTION

University receives water from following sources:

1. Tube well (900 cubic metre per day)
2. Uttarakhand's Jal Sansthan (4 water supply lines, which provide total 250 cubic metre per day).

Tube well water source near University is taken from artesian well which do not require any pumping to be done extra to extract from groundwater. Hence there is no additional pressure on existing groundwater table in process of extraction. Only, the accumulated water is pumped to water storage.

Uttarakhand Jal Sansthan further extract water from nearby river resources which are precipitation fed small tributaries, natural springs and tube wells as per the Government policy.

2. WATER STORAGE

University has water storage capacity of total 700 cum which is constantly being used and filled up whenever required. The storage is fitted with prevention of water overflow to stop water wastage.

3. WATER DISTRIBUTION SYSTEM

University is having layout of water supply lines scientifically designed with corrosion free and durable materials that maximize leak proof water supply and prevent contamination from outside sources. Both water supply and sewer lines are running

Established vide Uttarakhand Act No. 10 of 2013
Recognized by UGC under Section 2 (f) of the UGC Act, 1956



apart having reasonable six feet distance longitudinally & vertically. Periodical maintenances are conducted for both the lines to prevent any mechanical failure and leakage in pipelines. University also takes care of any further water accumulation near the lines during precipitation to stop contamination.

4. WATER TREATMENT FACILITIES

University has advanced water treatment facility consisting of three types of filters for which is combined with storage facility to provide additional treated water after water collection from sources: Multi Graded Filter (MGF), Activated Carbon Filters (ACF), Water Softener.

MGF is used to remove suspended solids, dust and dirt present in the water. ACFs are used in the process of removing organic compounds. Water softener is deployed for keeping water hardness within permissible limit.

5. WATER USAGE

Per day water consumption is 600 cubic metre with full capacity of 6000 Students that include 2000 hostlers and 4000 day scholars, 600 number staff and 100 number of visitors.

6. WATER DISTRIBUTION POLICY

DIT University believes everyone is having fundamental right to get potable water without any conditions and constraints in society. Therefore, University shares and distributes its water resources free for all its stakeholders and outside guests. There is no financial charge attributed on anyone for water usage. However, University promotes and encourages all for sustainable use of this resources.

7. STRATEGY OF BUILDING TO MINIMIZE THE WATER USAGE

DIT University buildings are fitted with pressmatic water dispensing taps and flushing cisterns with minimum time setting to reduce water wastage. Same is also done in laboratories where sink is used.

8. WASTE WATER MANAGEMENT FACILITY

University has sewage treatment plant (STP) facility of capacity 500 cubic metre per day capacity to handle waste water of the University. In addition to this, another unit of 265 cubic metre per day capacity is kept on standby in case of emergency of maintenance of the primary unit or non-functioning. STP process and test results are well maintained in log book. The quality of water is periodically tested in Government approved laboratories and submitted to concerned offices.

9. WATER REUSE

DIT University complies with zero discharge policy of the Central and State Pollution Control Board. No water is discharged to the surrounding environment. All the used water is treated in STP and reused for Horticulture & Flushing of Toilets.



10. WATER CONSERVATION FACILITIES

University has water harvesting plant where rain water of 1200 m² area is collected & discharged to ground water after passing through six stage cleaning /filtration process. The complete process is defined at site also documented. Average rain fall is approx. 1500mm (Annual), total area is 1200 m² for water harvesting pit, approx.1100 cubic metre water every year.

11. UNIVERSITY AIMS AND INITIATIVES

11.1 Responsibilities of Stakeholders

- Proactively support of all stakeholder in execution of water sustainability measures by University
- Self-motivation among all to stop water wastage wherever the same is found.
- Judicious use of water for drinking and other purposes
- Proactively reporting and taking measures if there any leakage or mechanical failure in water supply lines.
- Enthusiastic participation in all water conservation related activities hosted by University on and off campus.
- Commitment towards green campus policy and environmental management
- Involvement in community program for awareness campaign outside University campus

11.2 MONITORING, MAINTENANCE AND RECORDS

- Monitor water supply records periodically with log book
- Maintenance record of water supply systems, storage and leakage
- Replacement of faulty pipelines, joints, taps, closets, Pipe appurtenances
- Use of cost effective, durable, environmental friendly materials in water and water pipelines and appurtenances
- Updation and planning of pipe network as per the requirements of new buildings to be constructed and its floor plans in the campus.
- Periodical efficiency measurement of water pipe appurtenances
- Planning of integrated water management system in campus

11.3 WATER AUDIT AND COMPLIANCE OF RECOMMENDATIONS

- Updated documentation on water volume extraction, storage, distribution, reuse.
- Updated record of reports of maintenance need and subsequent actions taken
- Periodical internal and external audit.
- Analysis of the audit report in statutory bodies and further recommendation plan
- Vision and planning of achieving water efficient building standards



11.4 EDUCATION, RESEARCH AND OUTREACH PROGRAMS TO PROMOTE WATER SUSTAINABILITY

- Integration of courses and programs related to environmental sustainability, water quality management, waste water treatment, rainwater harvesting
- Ensuring minimum courses to be opted by university students as core mandatory courses and increase the limit for option for free courses.
- Arranging joint collaborative workshops or conferences on environmental sustainability. Enhance the collaborative research on same with national and international agencies.
- Involvement in national and international missions to promote sustainability through panel discussions, debates, joint statements, publications
- Appropriate signages and posters on campus to promote awareness on water saving, water conservations.



Kuhag

Registrar